SyncMaster OL46B

LCD Display

User Manual

The color and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.

SAMSUNG

Safety Instructions

Notational

Note

These safety instructions must be followed to ensure your safety and prevent property damage.

Make sure to read the instructions carefully and use the product in the correct manner.

Warning / Caution

Failure to follow directions noted by this symbol could result in bodily harm or damage to the equipment.

Note

Prohibited	Important to read and understand at all times
Do not disassemble	Disconnect the plug from the outlet
Do not touch	Ground to prevent an electric shock

An administration fee may be charged if either

- (a) an engineer is called out at your request and there is no defect in the product

  (i.e. where you have failed to read this user manual).

- (b) you bring the unit to a repair centre and there is no defect in the product

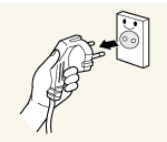
  (i.e. where you have failed to read this user manual).

The amount of such administration charge will be advised to you before any work or home visit is carried out.

Cleaning the Monitor

Cleaning

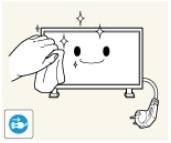
The panel and exterior of the cutting-edge monitor scratch easily and require careful attention. Clean the monitor according to the following steps.



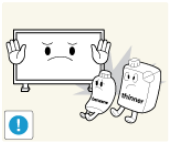
- Power off the monitor and PC.
- Disconnect the power cable from the monitor.

Note

To avoid electric shock, be sure you disconnect the cable by gripping the plug and do not touch the cable with wet hands.



- Wipe the monitor using a soft, slightly damp cloth that has been squeezed .



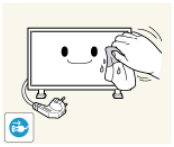
Do not use a cleaning agent that contains alcohol or solvents, or that is surface active.

Otherwise, the exterior may discolor or crack or the panel coating may come off.

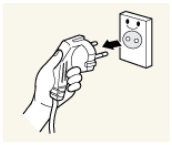


Do not spray water or cleaning agent directly onto the monitor.

Otherwise, the liquid may sink into the monitor and cause a fire, electric shock, or failure.



Clean the exterior of the monitor using a soft cloth dampened with a small amount of water.



- Connect the power cable to the monitor after you have finished cleaning.
- Power on the monitor and PC.

Power

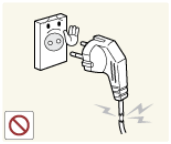


When not used for extended period of time, set your computer to DPM.

If using a screen saver, set it to active screen mode.

The images here are for reference only, and are not applicable in all cases (or countries).

Shortcut to Anti-Afterimage Instructions



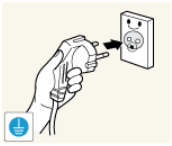
Do not use a damaged power cord or plug or a damaged or loose power outlet.

- Otherwise, this may result in electric shock or fire.



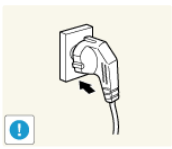
Do not touch the power plug with wet hands when removing or plugging the plug into the outlet.

- Otherwise, this may result in electric shock.



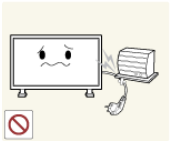
Make sure to connect the power cord to a grounded power outlet.

- Otherwise, it may result in electric shock or personal injury.



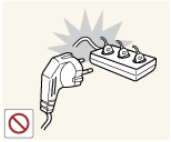
Ensure that the power plug is plugged into the power outlet firmly and correctly.

- Otherwise, this may result in fire.



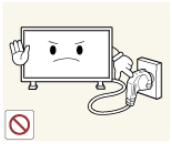
Do not forcefully bend or pull the power plug and do not place any heavy material on it.

- Otherwise, this may result in fire.



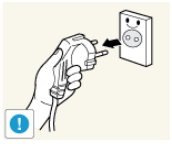
Do not connect multiple appliances to the same power outlet.

- Otherwise, this may cause fire due to overheating.



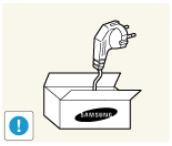
Do not disconnect the power cord while using the product.

- Otherwise, this may result in damage to the product due to electric shock.



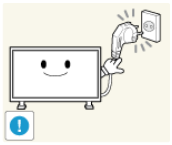
To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.

- Otherwise, this may cause electric shock or fire.



Use only the power cord provided by our company. Do not use the provided power cord of another product.

- Otherwise, this may result in fire or electric shock.



Connect the power plug to a wall outlet that can be easily reached.

- When a problem occurs with the product, you must unplug the power plug to cut the power off completely. You cannot cut the power off completely using only the power button on the product.

Installation



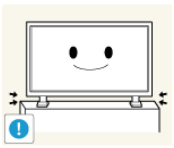
Be sure to contact an authorized Service Center when installing your monitor in a location with heavy dust, high or low temperatures, high humidity, and exposed to chemical substances and where it operates for 24 hours such as at airports, train stations etc.

Failure to do so may cause serious damage to your monitor.



Ensure that at least two persons lift and move the product.

- Otherwise, it may be dropped and cause personal injury, and/or damage the product.



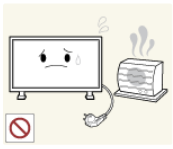
When installing the product in a cabinet or rack, make sure that the front end of the bottom of the product does not project out.

- Otherwise, it may fall or cause personal injury.
- Use a cabinet or rack of a size appropriate to the product.



DO NOT PLACE CANDLES, MOSQUITO REPELLANT, CIGARETTES AND ANY HEATING APPLIANCES NEAR THE PRODUCT.

- Otherwise, this may result in fire.



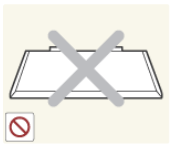
Keep heating appliances as far away from the power cord or the product as possible.

- Otherwise, this may result in electric shock or fire.



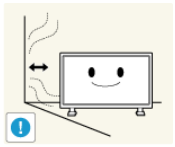
When putting the product down, make sure to put it down softly.

- Otherwise, this may result in damage to the screen display.



Do not place the front of the product on the floor.

- Otherwise, this may result in damage to the screen display.



Install your product in a well ventilated location. Ensure that there is a clearance of more than 4 inches (10 cm) from the wall.

- Otherwise, it may result in fire due to an increase in the internal temperature.



Ensure that the packaging vinyl is kept away from children.

- Otherwise, it may result in serious harm (suffocation) if children play with it.



If the height of your monitor is adjustable, do not place any object or part of your body on the stand when lowering it.

- This may cause damage to the product or the person carrying it.



Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.

Others



The product is a high voltage product. Do not disassemble, repair or modify the product yourself.

- Otherwise, this may result in electric shock or fire. If the product needs to be repaired, contact a Service Center.



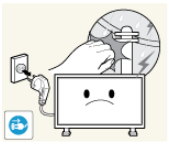
If there is a strange smell or a strange sound or smoke is coming from the product, disconnect the power plug immediately and contact a Service Center.

- Otherwise, this may result in electric shock or fire.



When you drop the product or the case is broken, turn the power off and disconnect the power cord. Contact a Service Center.

- Otherwise, this may result in electric shock or fire.



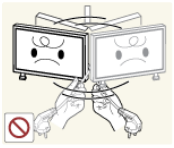
During a lightning or thunderstorm, power off the product and remove the power cable.

- Otherwise, this may result in electric shock or fire.



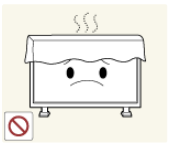
Do not try to move the monitor by pulling only the wire or the signal cable.

- Otherwise, it may fall and result in electric shock, damage to the product or fire due to damage to the cable.



Do not lift or move the product back and forwards or right and left while only holding the power cord or signal cables.

- Otherwise, it may fall and result in electric shock, damage to the product or fire due to damage to the cable.



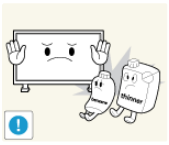
Make sure that the ventilating opening is not blocked by a table or curtain.

- Otherwise, it may result in fire due to an increase in the internal temperature.



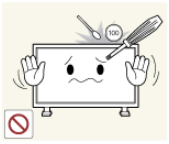
Do not place any containers containing water, vases, flowerpots, medicines as well as any metal on the product.

- If water or a foreign material enters the product, disconnect the power cord and contact a Service Center.
- This may result in a product malfunction, electric shock, or fire.



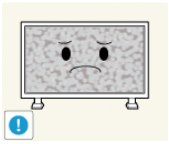
Do not use or keep combustible spray or flammable material near the product.

- Otherwise, this may result in an explosion or fire.



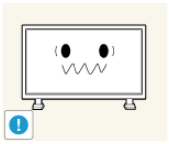
Do not insert any metal, such as chopsticks, coins, pins and steel, or flammable objects, such as matches or paper, inside the product (through the ventilating openings, input and output terminals, etc).

- If water or foreign material enters the product, disconnect the power cord and contact a Service Center.
- Otherwise, this may result in electric shock or fire.



When using a fixed screen for a long time, an afterimage or stain may occur.

- If you are not using your product for a long period of time, put it into sleep mode or use a moving screen saver.



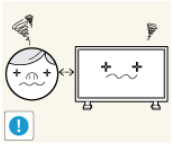
Set a resolution and frequency appropriate to the product.

- Otherwise, your eyesight may be damaged.

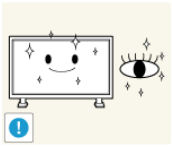


When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.



To avoid eyestrain, do not sit too close to the product.



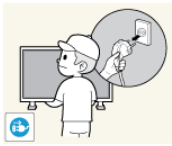
Take a rest for at least five (5) minutes after using the monitor for one (1) hour.

This reduces eye fatigue.



Do not install it in an unstable location such as an unstable rack or uneven surface or a location exposed to vibrations.

- Otherwise, it may fall and cause personal injury and/or damage the product.
- If you use the product in a location exposed to vibrations, it may damage the product and result in fire.



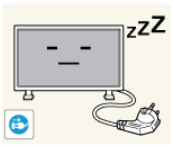
When moving the product, turn the power off and disconnect the power plug, antenna cable, and all the cables connected to the product.

- Otherwise, it may result in electric shock or fire.



Ensure that children do not hang onto the product or climb up onto the product.

- The product may fall and cause personal injury or death.



If you do not use the product for a long period of time, disconnect the power cord from the power outlet.

- Otherwise, this may result in overheating or fire due to dust, and may result in fire due to electric shock or leakage.



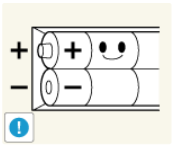
Do not place any heavy items or toys or confectionery, such as cookies etc. that may attract the attention of children and to the product.

- Your children may hang onto the product causing it to fall and this may result in personal injury or death.



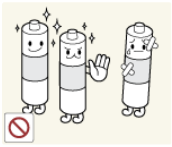
Be careful that children do not place the battery in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

- If children have had the battery in their mouths, consult your doctor immediately.



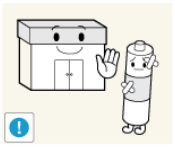
When replacing the battery, insert it with the right polarity (+, -).

- Otherwise, the battery may become damaged or it may cause fire, personal injury or damage due to leakage of the internal liquid.



Use only the specified standardized batteries, and do not use a new battery and a used battery at the same time.

- Otherwise, the batteries may be damaged or cause fire, personal injury or damage due to a leakage of the internal liquid.



The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling.

- The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.



Do not drop any objects onto the product or cause any impact to the product.

- Otherwise, this may result in electric shock or fire.



Do not put any heavy objects on the product.

- This may result in personal injury and/or damage to the product.

Power Installation Guide

Make sure to read and follow the instructions carefully and correctly. Failing to do so, may result in death, serious personal injury or fire.

- Before installing the product, make sure to check the power requirements for the installation location.

  If you want to install the product in a power environment (power cable, power outlet, circuit breaker, etc.) with a current/power capacity lower than the current product consumption/power consumption, install a separate power transformer according to the 'Rated Capacities' table.

  The consumer should pay the expenses for this.

- Make sure to connect the product to a dedicated power outlet and do not connect it to a multi-plug extension cord.

  If you have to use a multi-plug extension cord, refer to the current consumption in the 'Rated Capacities' table and use a multi-plug with the permitted current specifications greater than the total current consumption of the products connected to it.

- When using a dedicated power extension cable, use a high-capacity power cable.

  Use a power cable with a permitted current of 12.5 A or more.

Rated Current of the Power Plug /Cord/Appliance Coupler

- Use a power cable with 12.5 A or more.

Refer to the Cable Safety Specifications.

- UL specifications - Use a cable with 14 AWG or more
- KS specification - Use a cable with 20.SQ or more
- IEC specification - Use a cable with 2.5 SQ or more

Introduction

Package Contents

Note

Please make sure the following items are included with your LCD Display.

If any items are missing, contact your dealer.

Contact a local dealer to buy optional items.

Unpacking



LCD Display

Manuals



Quick Setup Guide



Warranty Card

(Not available in some locations)



User Manual

Others



Remote Control



Batteries (AAA X 2)

(Not available in some locations)



Brackets link top



Brackets link bottom (x 2)



Bolts (x 4)



Wrench Bolts (x 4)

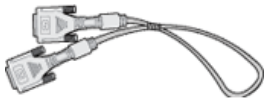


L Wrench (x 2)

Sold separately



D-Sub Cable



DVI Cable



LAN Cable



DP Cable



HDMI Cable



RS232C Cable



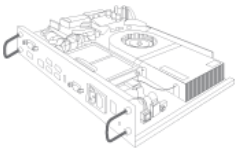
USB Cable



Stereo Cable



RGB to COMPONENT Cable



Network Box

Your LCD Display

The color and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.

Front



1. *Brightness Sensor*

   Brightness Sensor detects the ambient light intensity so that the picture brightness can automatically be adjusted.

2. *Power indicator*

   Shows PowerSaver mode by blinking green

   Note

   See PowerSaver described in the manual for further information regarding power saving functions. For energy conservation, turn your LCD Display OFF when it is not needed or when leaving it unattended for long periods.

3. *Remote Control Sensor*

   Aim the remote control towards this spot on the LCD Display.

4. *Speaker*

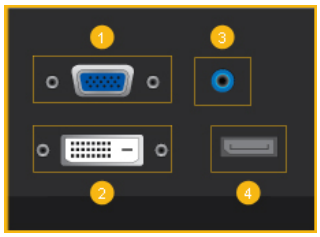
Rear

Note

For detailed information concerning cable connections, refer to Connecting Cables under Setup. The LCD Display 's configuration at the back may vary slightly depending on the LCD Display model.



A



1 *RGB/COMPONENT IN (PC/COMPONENT Connection Terminal (Input))*

- Connect the *[RGB/COMPONENT IN]* port on the monitor to the RGB port on the PC using the D-SUB cable.
- Connect the *[RGB/COMPONENT IN]* port on the monitor to the COMPONENT port on the external device using the RGB to COMPONENT cable.
- Connect the *[RGB/COMPONENT IN]* port on the monitor to the BNC port on the PC using the RGB to BNC cable.

2 *DVI IN (PC Video Connection Terminal)*

Connect the *[DVI IN]* port on the monitor to the DVI port on the PC using the DVI cable.

3 *RGB/DVI/HDMI AUDIO IN (PC/DVI/HDMI Audio Connection Terminal (Input))*

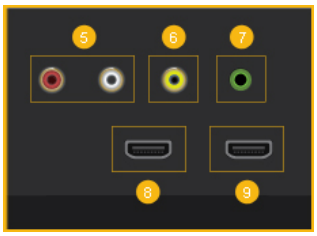
Connect the *[RGB/DVI/HDMI AUDIO IN]* terminal of the monitor and the speaker output terminal of your computer's sound card using a stereo cable (sold separately).

4 *DP IN*

Receives a signal from the Display port.

Connect a DP cable to *[DP IN]* on the product and DP IN on another devices.

B



5 *AV/COMPONENT AUDIO IN [R-AUDIO-L]*

Connect the *[AV/COMPONENT AUDIO IN [R-AUDIO-L]]* port on the monitor to the audio output port on the PC or on the external device using an audio cable.

6 *AV IN*

Connect the *[AV IN]* terminal of your monitor to the video output terminal of the external device using a VIDEO cable.

7 *AUDIO OUT*

Connect a headphone or an External speaker.

8 *HDMI IN 1*

- Connect the *[HDMI IN 1]* terminal at the back of your LCD Display to the HDMI terminal of your digital output device using a HDMI cable.
- Up to HDMI 1.3 can be supported.

Note

- A normal external device (DVD player or camcorder, etc.) can be connected to the *[HDMI IN 1]* terminal.

9 *HDMI IN 2 (MAGICINFO)*

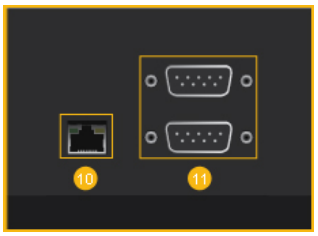
- Connect the *[HDMI IN 2 (MAGICINFO)]* terminal at the back of your LCD Display to the HDMI terminal of your digital output device using a HDMI cable.
- Up to HDMI 1.3 can be supported.

Note

To use **MagicInfo**, the network box specified separately by Samsung must be installed inside the product and the **MagicInfo** output of the network box must be connected to the *[HDMI IN 2 (MAGICINFO)]* terminal.

For more information on how to purchase and install a network box, contact Samsung Electronics.

C



10 *RJ 45 MDC (MDC PORT)*

MDC(Multiple Display Control) Program Port

Connect the LAN cable to *[RJ45 MDC]* on the product and LAN on the PC. To use an MDC, the MDC Program must be installed on the PC.

Note

Go to **Multi Control** and select **RJ45 MDC** as the **MDC Connection**.

11 *RS232C OUT/IN (RS232C Serial PORT)*

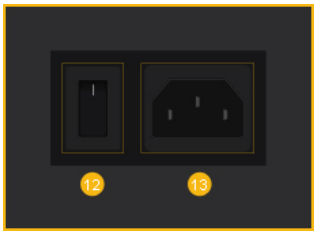
MDC(Multiple Display Control) Program Port

Connect a serial cable (cross type) to *[RS232C]* on the product and RS232C on the PC. To use an MDC, the MDC Program must be installed on the PC.

Note

Go to **Multi Control** and select **RS232C MDC** as the **MDC Connection**.

D



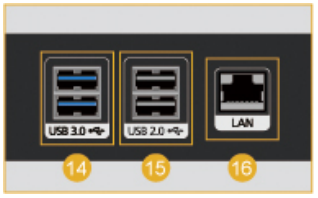
12 *POWER S/W ON [|] / OFF*

Switches the LCD Display On/Off.

13 *POWER*

The power cord plugs into the LCD Display and the wall outlet.

E Connecting a Network Box (sold separately)



14 *USB 3.0 (USB Connection Terminal)*

Connect to a device that supports USB 3.0. (Also compatible with a USB 2.0 device)

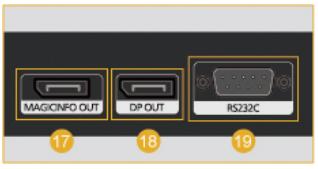
15 *USB 2.0 (USB Connection Terminal)*

Connect to a USB device such as a USB keyboard, mouse, memory, or digital camera.

16 *LAN (LAN Connection Terminal)*

Connect to the Internet using a LAN cable.

F Connecting a Network Box (sold separately)



17 *MAGICINFO OUT*

Connect the network box to a Samsung display device that has a MAGICINFO port using the MAGICINFO OUT-HDMI cable provided. (A

display device not manufactured by Samsung cannot be used.)

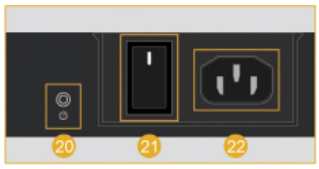
18 *DP OUT*

Connect the network box to a display device that supports DP using the DP cable.

19 *RS232C (RS232C Serial PORT)*

Connect to a device that supports serial communication.

G Connecting a Network Box (sold separately)



20 ⏻

Power on or off the network box.

21 *POWER S/W ON [|] / OFF [O]*

Turn on or shut off the AC power supply.

22 *POWER*

Connect to the power cord.

H



H *Button*

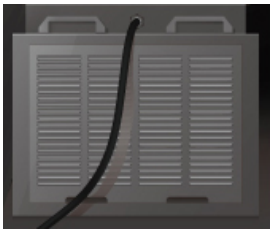
Not available.

I



I *Air exhaust vent*

J



J *Air intake vent*

Note

- Periodically replace the intake vent filter at the lower part of the product.
- Length of the replacement cycle may vary depending on the fine dust concentration (PM-10) in the location of installation. Refer to the table below.
    - Fine dust (PM-10): Tiny particles that are very thin with a diameter of 10㎛ or less

Intake filter replacement cycle according to the dust concentration

Dust Concentration (㎍/㎥)	70	60	50	40	30	20	10
Replacement cycle	9 months	11 months	13 months	16 months	21 months	32 months	64 months

- If you do not know the dust concentration in the area of installation, it is recommended that you replace the filter before summer begins every year.
    - Especially in a location exposed to a lot of dust, the filter must be replaced at least every 6 months. A partially dark screen is likely a result of the filter being used longer than the recommended replacement cycle. Replace the filter immediately.
    - In Europe and the United States, the yearly mean dust concentration is less than 30㎍/㎥ and the recommended replacement cycle is about 21 months. In Korea, the yearly mean dust concentration is less than 60㎍/㎥ and the recommended replacement cycle is about 11 months. The dust concentration and recommended replacement cycle may vary according to the location of installation.

Note

The power switches of both of the monitor and the network box must be turned on for the network box to operate normally.

Remote Control

Note

- Using other display devices in the same space as the remote control of this product can cause the other display devices to be inadvertently controlled.
- Remote control button functions may differ for different products.



1. ⏻
2. SOURCE
3. OFF
4. Number Buttons
5. —
6. + VOL -
7. CONTENT (HOME)
8. MagicInfo Lite
9. TOOLS
10. Up-Down Left-Right / Enter buttons
11. RETURN
12. The Color button / The PC/DVI/HDMI/DP selection button
13. MagicInfo
14. 3D
15. ◀◀(⏮) / ▶/ ⏸/ ▶▶(⏭) / ■
16. D.MENU
17. MUTE
18. ∧ CH ∨
19. MENU
20. BLANK
21. INFO
22. EXIT
23. LOCK

1 ⏻	Power on the product.
2 SOURCE	Select a connected source device.
3 OFF	Power off the product.
4 Number Buttons	Enter the password in the OSD menu.
5 —	Not available.
6 + VOL -	Adjust the volume.
7 CONTENT (HOME)	Not available.
8 MagicInfo Lite	Not available.

9 TOOLS	Not available.
10 Up-Down Left-Right / Enter buttons	Up-Down Left-Right button : Move to the upper, lower, left or right menu, or adjust an option's setting. Enter button : Activates a highlighted menu item.
11 RETURN	Return to the previous menu.
12 The Color button / The PC/DVI/HDMI/DP selection button	Manually select a connected input source from **PC**, **DVI**, **HDMI** or **DP**.
13 MagicInfo	**MagicInfo** Quick Launch Button. MagicInfo can only be enabled when a network box(sold separately)is connected. This button is disabled for products that do not support **MagicInfo**.
14 3D	Not available.
15 ◀◀(I◀◀) / ▶ / II / ▶▶ (▶▶I) / ■	Not available.
16 D.MENU	Not available.
17 MUTE	Mute the sound. Unmuting the sound: Press MUTE again or press the volume control (+ VOL -) button.
18 ∧ CH ∨	Not available.
19 MENU	Display or hide the onscreen display menu, or return to the previous menu.
20 BLANK	Not available.
21 INFO *i*	Display information on the screen.
22 EXIT	Exit the current menu.
23 LOCK	It sets safe lock function.

Fixing the product

Unpacking



Brackets link top



Brackets link bottom (x 2)



Bolts (x 4)



Wrench Bolts (x 4)



L Wrench (x 2)

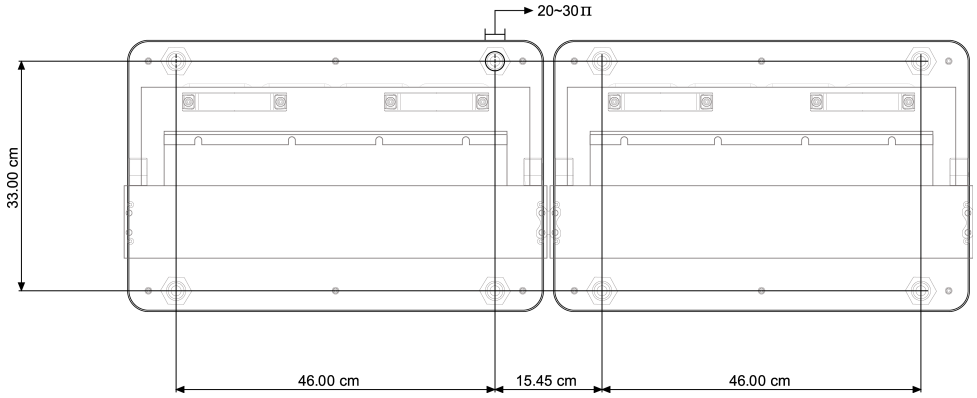
Note

To install components that are not provided in the package, purchase the components separately.

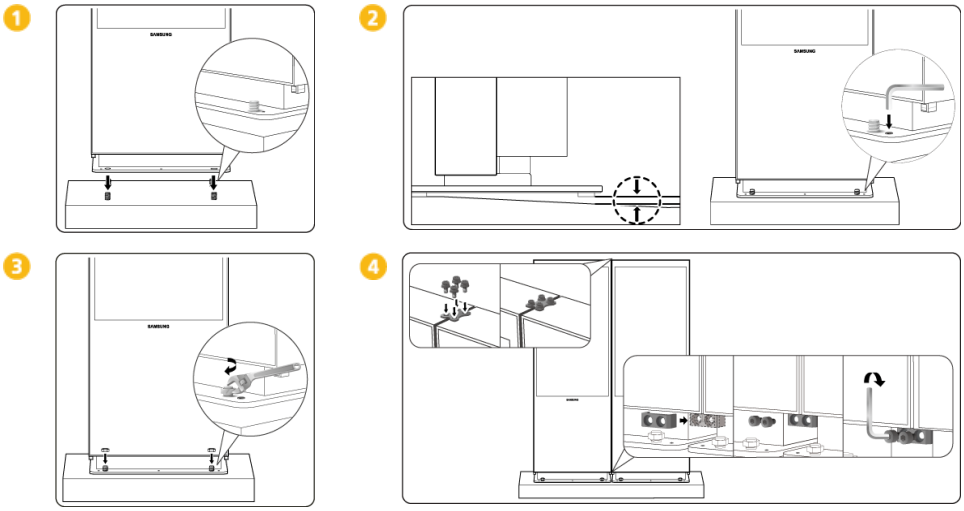
Note

- The product can tip over easily. Ensure the product is fastened to the ground.
- For the installation locations of the anchors (sold separately) on the ground, refer to the dimensions of the base as shown below.

Dimensions of the base



Process to fix the product

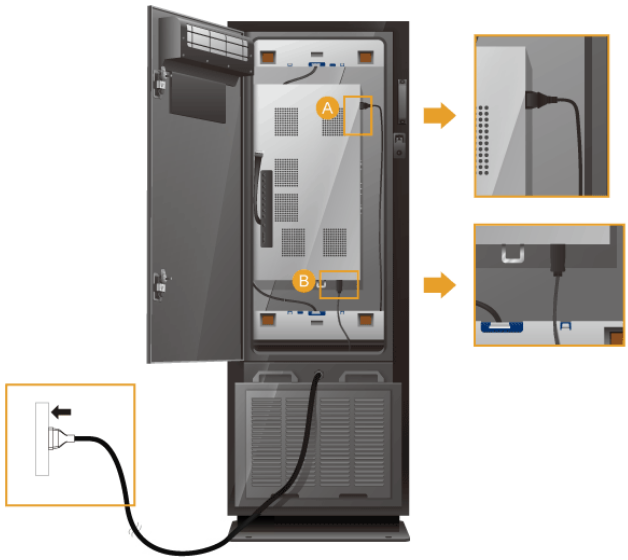


Connecting a Network Box

Connecting the Power

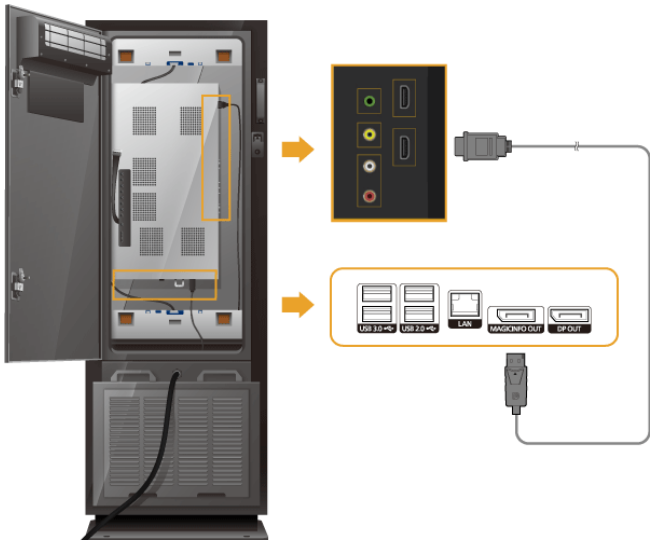
Note

- Network boxes are sold separately.
- For more information on how to purchase and install a network box, contact Samsung Electronics.



Connect the power cables inside the product to power input port A on the product and power input port B on the network box respectively.

Connecting to MAGICINFO OUT



Connect the [MAGICINFO OUT] terminal of the network box and the [HDMI IN 2 (MAGICINFO)] terminal of the monitor using the **DP** to **HDMI** cable.

Note

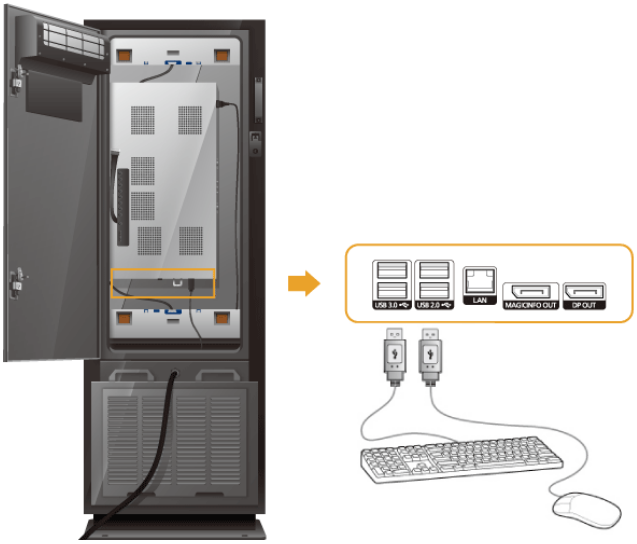
- A MAGICINFO OUT-HDMI cable is provided with the network box.

Connecting a LAN Cable



Connect the [LAN] port on the product and your network using a LAN cable.

Connecting a USB devices



You can connect USB devices such as a mouse or keyboard.

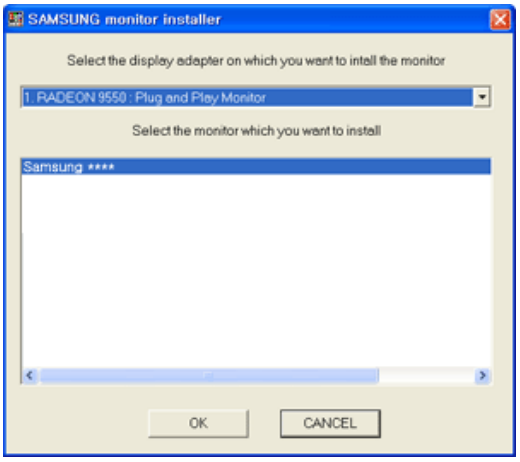
Using the Software

Monitor Driver

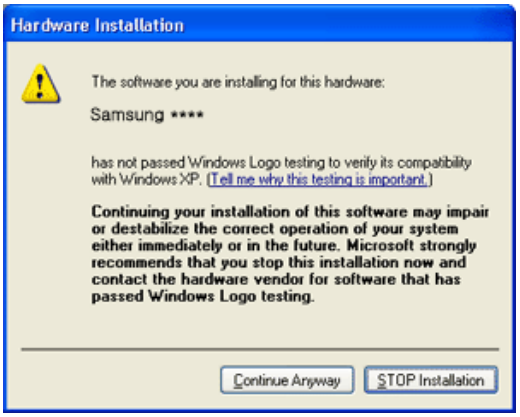
> **Note**
>
> When prompted by the operating system for the monitor driver, insert the CD-ROM included with this monitor. Driver installation is slightly different from one operating system to another. Follow the directions appropriate for the operating system you have.
>
> Prepare a blank disk and download the driver Program file at the Internet web site shown here.
> **Internet web site :**
>
> http://www.samsung.com/

Installing the Monitor Driver (Automatic)

1. Insert CD into the CD-ROM drive.
2. Click "Windows".
3. Choose your monitor model in the model list, then click the "OK" button.



4. If you can see following message window, then click the "Continue Anyway" button. Then click "OK" button (Microsoft® Windows® XP/2000 Operating System).



Note

This monitor driver is certified by Microsoft, and installing it will not damage your system.

The certified driver will be posted on Samsung Monitor homepage.

http://www.samsung.com/

Installing the Monitor Driver (Manual)

Microsoft® Windows Vista™, Operating System

1. Insert your Manual CD into your CD-ROM drive.
2. Click (Start) and "Control Panel". Then, double-click on "Appearance and Personalization".




3. Click "Personalization" and then "Display Settings".

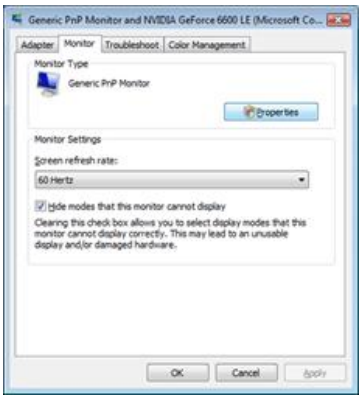



4. Click "Advanced Settings...".



5. Click "Properties" in the "Monitor" tab. If the "Properties" button is deactivated, it means the configuration for your monitor is completed. The monitor can be used as is.

   If the message "Windows needs..." is displayed, as shown in the figure below, click "Continue".



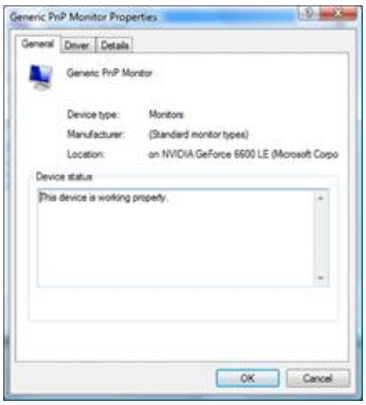


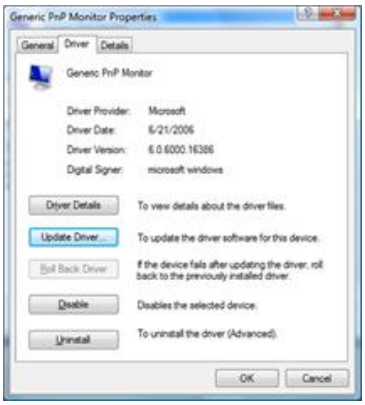
Note

This monitor driver is under certifying MS logo, and this installation will not damage your system.

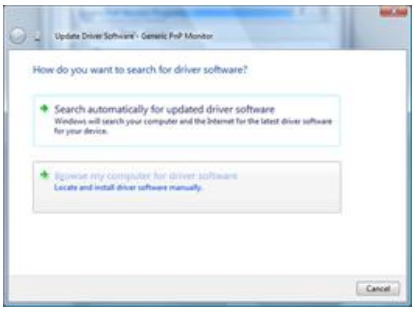
The certified driver will be posted on Samsung Monitor homepage.

6. Click "Update Driver..." in the "Driver" tab.



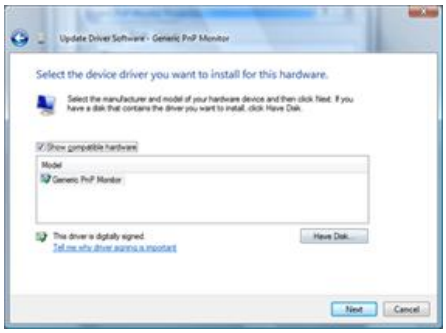


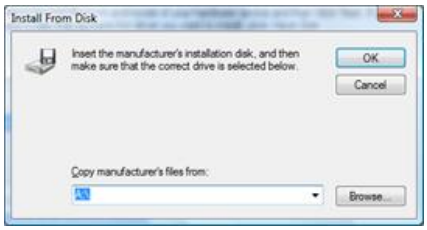
7. Check the "Browse my computer for driver software" checkbox and click "Let me pick from a list of device drivers on my computer".



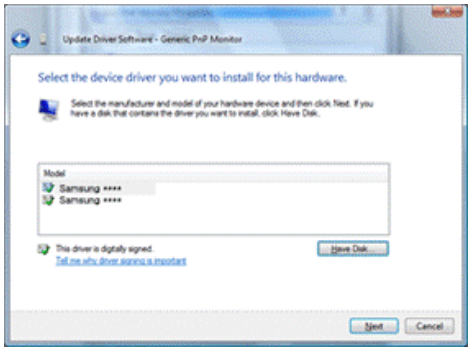


8. Click "Have Disk..." and select the folder (for example, D:\Drive) where the driver setup file is located, and click "OK".

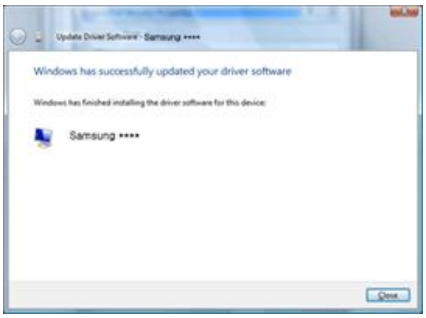


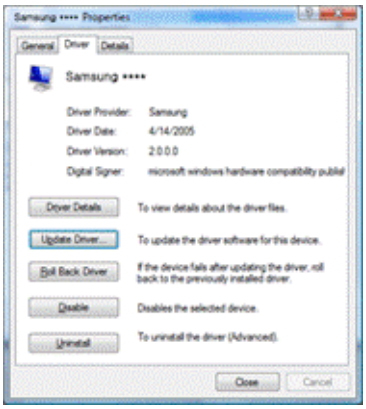


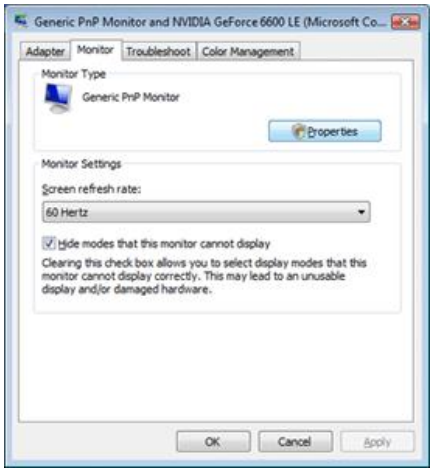
9. Select the model that matches your monitor from the list of monitor models on the screen, and click "Next".

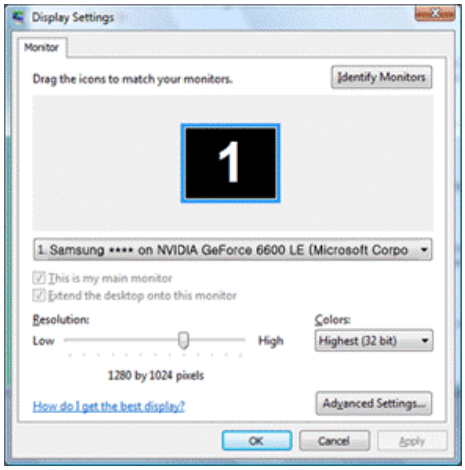


10. Click "Close" → "Close" → "OK" → "OK" on the following screens displayed in sequence.







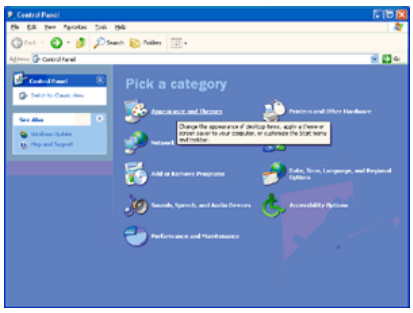


Microsoft® Windows® XP Operating System

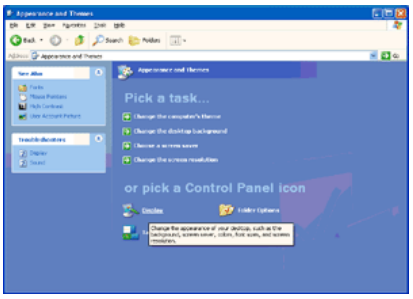
1. Insert CD into the CD-ROM drive.

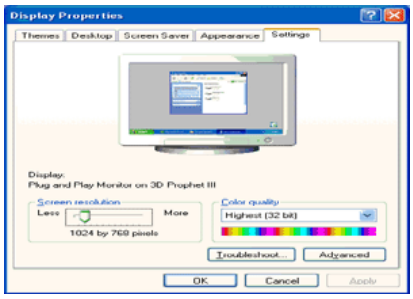
2. Click "Start" → "Control Panel", then click the "Appearance and Themes" icon.



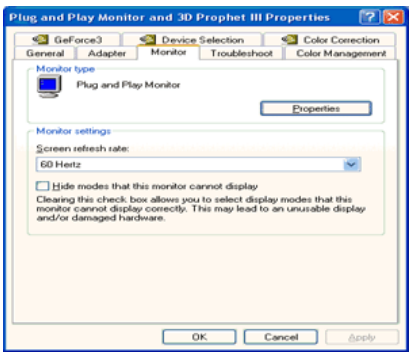


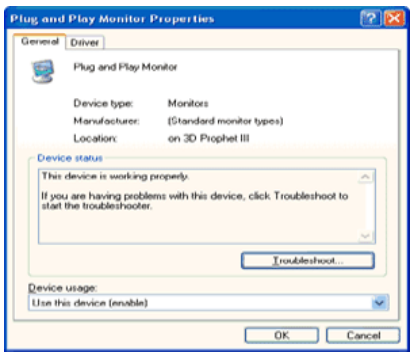
3. Click "Display" icon and choose the "Settings" tab then click "Advanced...".



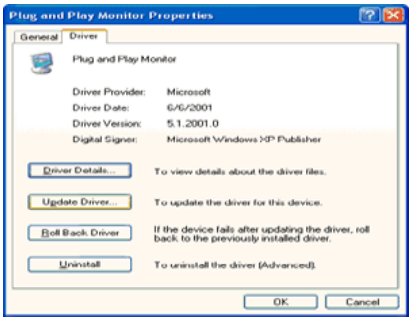


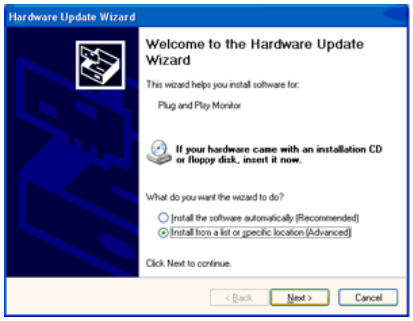
4. Click the "Properties" button on the "Monitor" tab and select "Driver" tab.



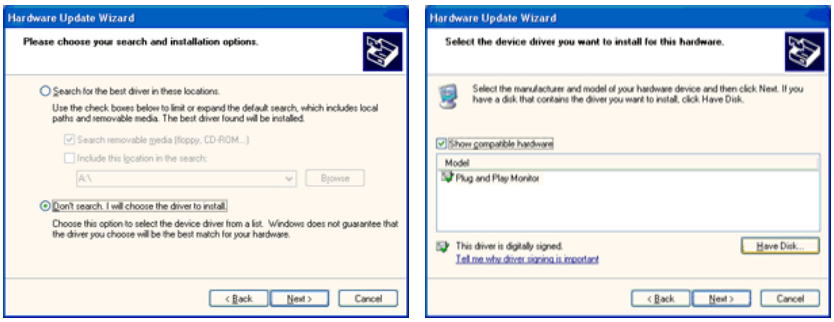


5. Click "Update Driver..." and select "Install from a list or..." then click "Next" button.

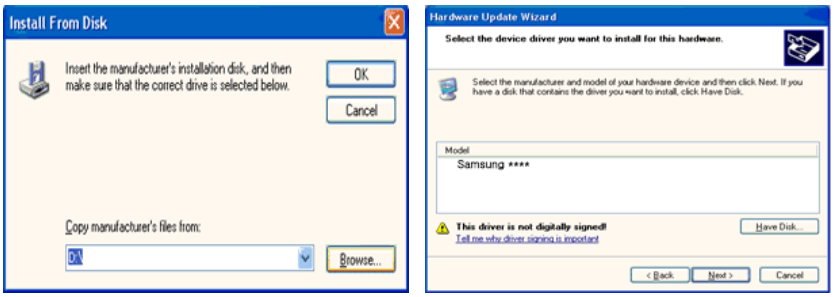




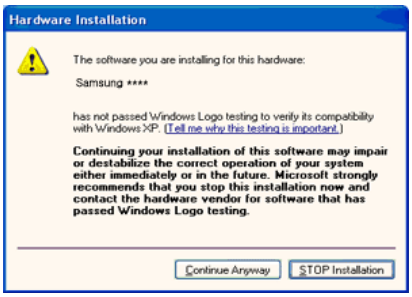
6. Select "Don't search, I will...", then click "Next" and then click "Have disk".



7. Click the "Browse" button then choose A:(D:\Driver) and choose your monitor model in the model list and click the "Next" button.



8. If you can see the following message window, then click the "Continue Anyway" button. Then click "OK" button.



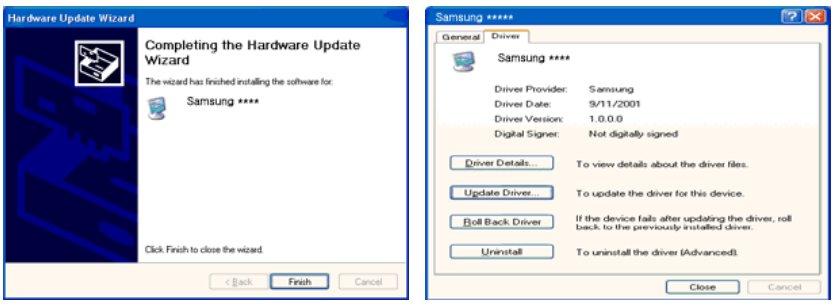
Note

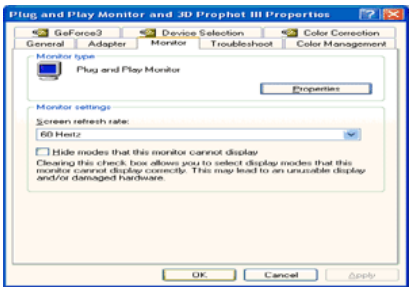
This monitor driver is certified by Microsoft, and this installation will not damage your system.

The certified driver will be posted on Samsung Monitor homepage.

http://www.samsung.com/

9. Click the "Close" button, then click the "OK" button continually.





10. Monitor driver installation is completed.

Microsoft® Windows® 2000 Operating System

When you can see "Digital Signature Not Found" on your monitor, follow these steps.

1. Choose "OK" button on the "Insert disk" window.
2. Click the "Browse" button on the "File Needed" window.
3. Choose A:(D:\Driver), then click the "Open" button and then click "OK" button.

How to install

1. Click "Start", "Setting", "Control Panel".
2. Double click the "Display" icon.
3. Select the "Settings" tab and click "Advanced Properties" button.
4. Choose "Monitor".

   Case1 : If the "Properties" button is inactive, it means your monitor is properly configured. Please stop installation

   Case2 : If the "Properties" button is active, click the "Properties" button, then follow the next steps.
5. Click "Driver" and then click on "Update Driver...", then click on the "Next" button.
6. Choose "Display a list of the known drivers for this device so that I can choose a specific driver", then click "Next" and then click "Have disk".
7. Click the "Browse" button, then choose A:(D:\Driver).
8. Click the "Open" button, then click "OK" button.
9. Choose your monitor model and click the "Next" button. Then click "Next" button.
10. Click the "Finish" button, then the "Close" button.

    If you can see the "Digital Signature Not Found" window, then click the "Yes" button. Then click the "Finish" button and the "Close" button.

Microsoft® Windows® Millennium Operating System

1. Click "Start", "Setting", "Control Panel".
2. Double click the "Display" icon.
3. Select the "Settings" tab and click "Advanced Properties" button.

4. Select the "Monitor" tab.
5. Click the "Change" button in the "Monitor Type" area.
6. Choose "Specify the location of the driver".
7. Choose "Display a list of all the driver in a specific location...", then click "Next" button.
8. Click the "Have Disk" button.
9. Specify A:\(D:\driver), then click "OK" button.
10. Select "Show all devices" and choose the monitor that corresponds to the one you connected to your computer and click "OK".
11. Continue choosing "Close" button and "OK" button until you close the Display Properties dialogue box.

Microsoft® Windows® NT Operating System

1. Click "Start", "Settings", "Control Panel", and then double-click "Display" icon.
2. In Display Registration Information window, click Settings Tab and then click "All Display Modes".
3. Select a mode that you wish to use (Resolution, Number of Colors and Vertical frequency) and then click "OK".
4. Click "Apply" button if you see the screen working normally after clicking "Test". If the screen is not normal, change to a different mode (lower mode of resolution, Colors or frequency).

Note

If there is no Mode at All Display Modes, select the level of resolution and vertical frequency by referring to the Preset Timing Modes in the user guide.

Linux Operating System

To execute X-Window, you need to make the X86Config file, which is a type of system setting file.

1. Press "Enter" at the first and the second screen after executing the X86Config file.
2. The third screen is for setting your mouse.
3. Set a mouse for your computer.
4. The next screen is for selecting a keyboard.
5. Set a Keyboard for your computer.
6. The next screen is for setting your monitor.
7. First of all, set a horizontal frequency for your monitor. (You can enter the frequency directly.)
8. Set a vertical frequency for your monitor. (You can enter the frequency directly.)
9. Enter the model name of your monitor. This information will not affect the actual execution of X-Window.
10. You have finished setting up your monitor. Execute X-Window after setting other requested hardware.

MDC Program Installation/Uninstallation

Installation

1. Insert the installation CD into the CD-ROM drive.
2. Click the **MDC Unified** installation program.

   If a software installation window is not displayed on the main screen, install with the "MDC Unified" execution file in the MDC folder on the CD.
3. Click "Next" in the displayed Installation Wizard screen.
4. In the "License Agreement" window displayed, select "I accept the terms in the license agreement" and click "Next".
5. In the displayed "Customer Information" window, fill out all the information fields and click "Next".
6. In the displayed "Destination Folder" window, select the directory path you want to install the program in and click "Next".

   If the directory path is not specified, the program will be installed in the default directory path.
7. In the displayed "Ready to Install the Program" window, check the directory path to install the program in and click "Install".
8. Installation progress will be displayed.
9. Click "Finish" in the displayed "InstallShield Wizard Complete" window.

   Select "Launch MDC Unified" and click "Finish" to run the MDC program immediately.
10. The MDC Unified shortcut icon will be created on the desktop after installation.

    - The MDC execution icon may not be displayed depending on the PC system or product specifications.
    - Press F5 if the execution icon is not displayed.

Uninstallation

1. Select **Settings** > **Control Panel** on the **Start** menu and double-click **Add/Delete Program**.
2. Select **MDC Unified** from the list and click **Change/Remove**.

   MDC installation can be affected by the graphics card, mother board and network conditions.

Multiple Display Control
MDC System

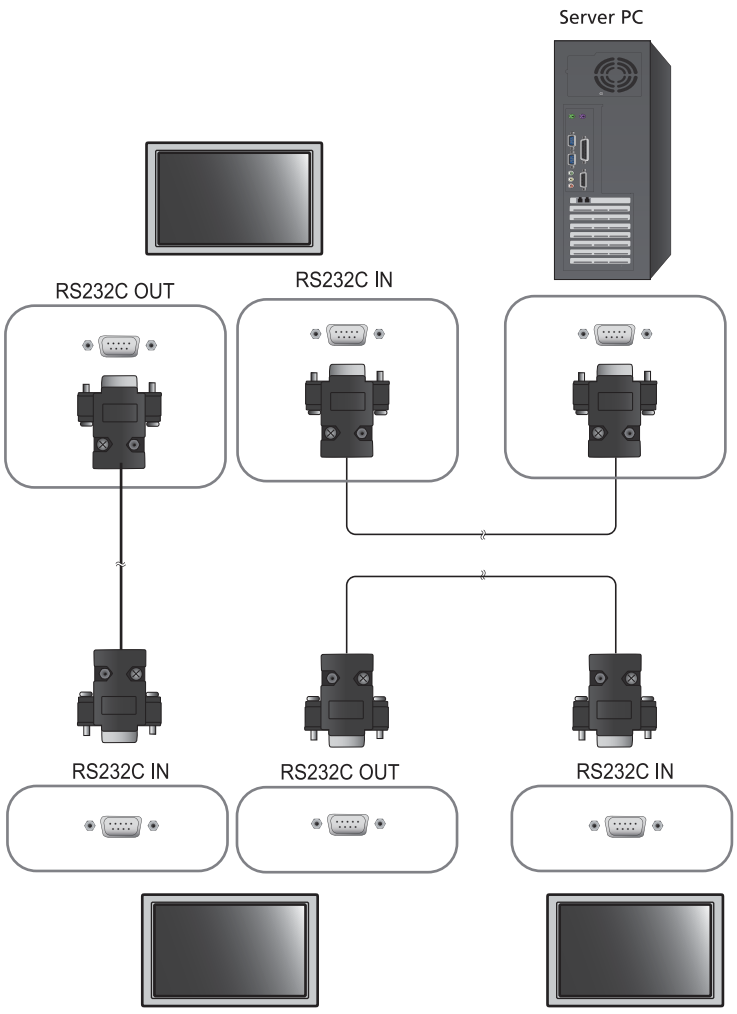
What is MDC?

Multiple display control "MDC" is an application that allows you to easily control multiple display devices simultaneously using a PC.

Connecting to MDC

Using MDC via RS-232C (serial data communications standards)

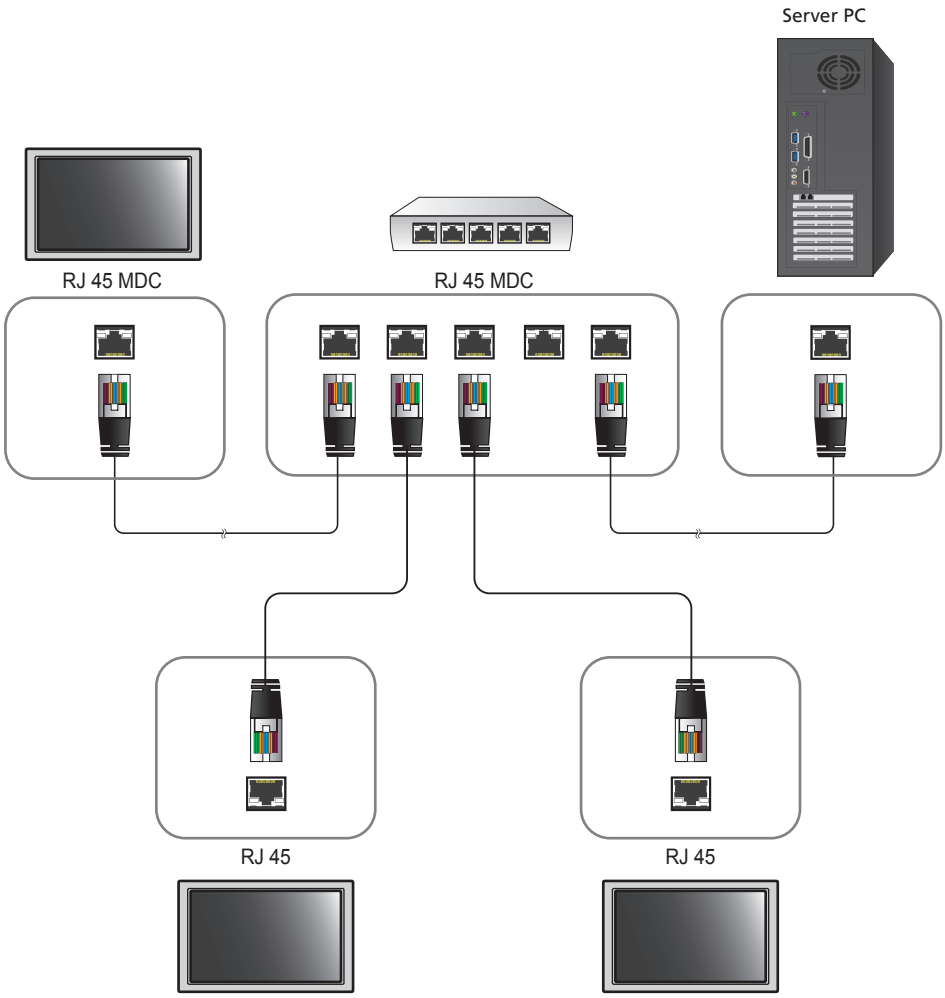
An RS-232C serial cable must be connected to the serial ports on the PC and monitor.



Using MDC via Ethernet

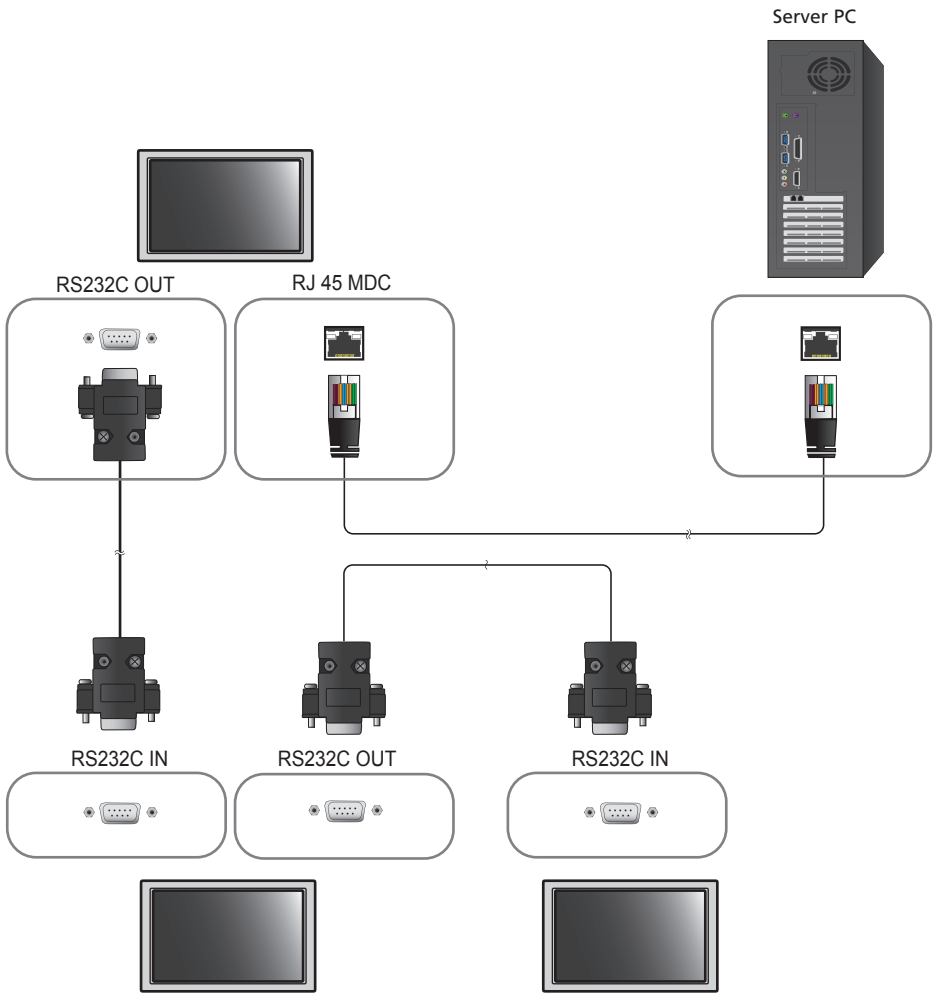
Enter the IP for the primary display device and connect the device to the PC. One display device can connect to another using an RS-232C serial cable.

Communicate with LAN cable



Multiple products can be connected using the [RJ45] port on the product and the LAN ports on the HUB.

Communicate with RS232C cable via the LAN cable



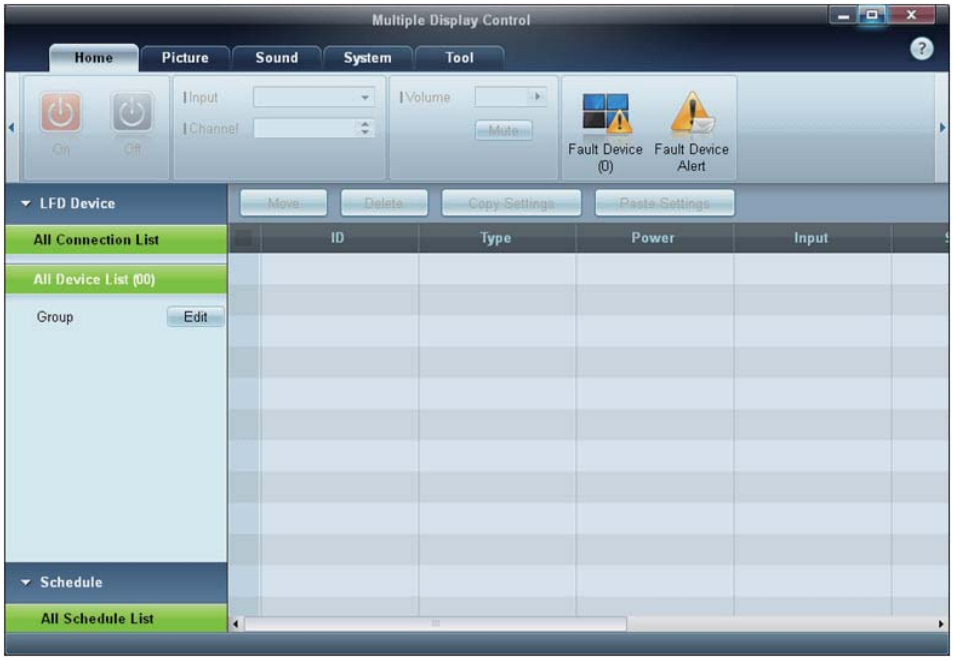
Multiple products can be connected using the [RS232C IN / OUT] port on the product.

Connection Management

Connection management includes the **Connection list** and **Connection list modification options**.

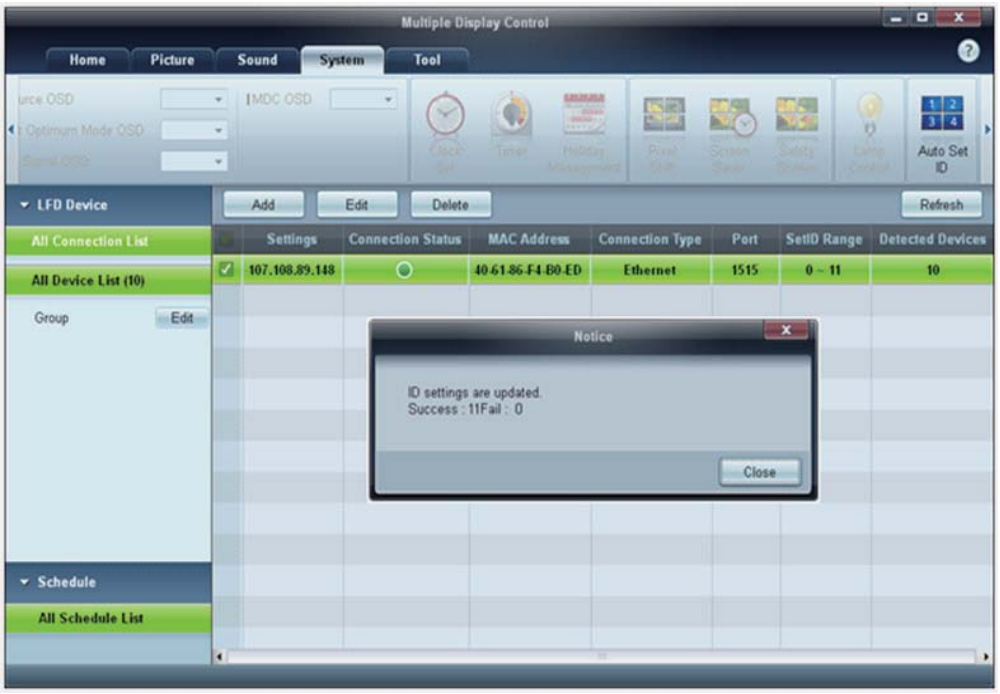
Connection list – Connection list shows the details of the connections such as connection setting (IP/ COM, Port No, MAC, and **Connection Type**), connection status, **Set ID Range**, and detected devices. Each connection can contain a maximum of 100 devices connected in serial daisy-chain fashion. All the LFDs detected in a connection are displayed in the Device list, where the user can make groups and send commands to detected devices.

Connection list modification options – Connection modification options includes **Add**, **Edit**, **Delete**, and **Refresh**.



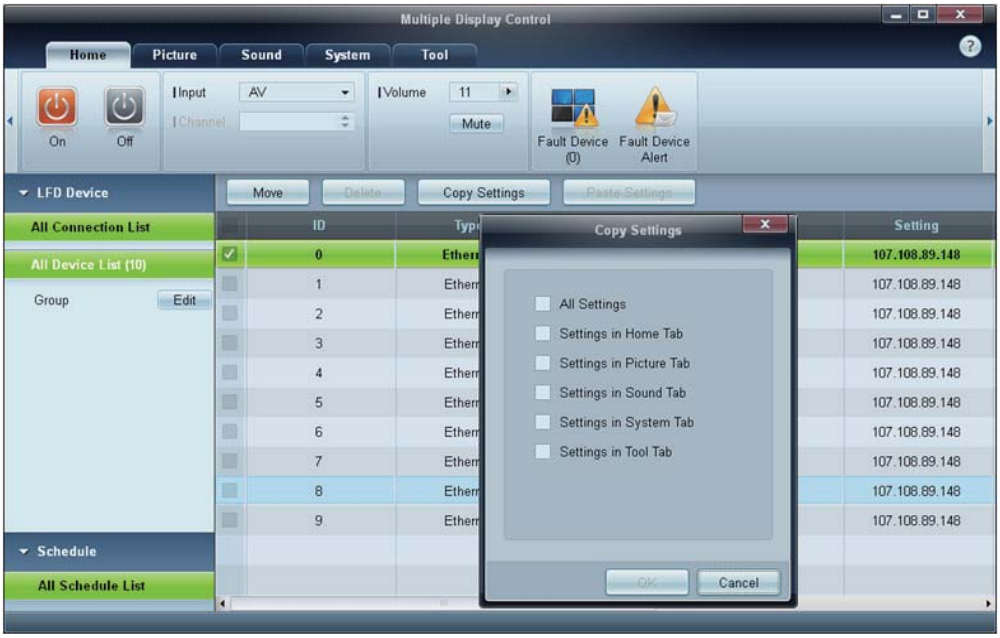
Auto Set ID

Auto Set ID feature assigns a Set ID for all the LFDs connected in daisy-chain of a selected connection. There can be a maximum of 100 LFDs in a connection. The Set ID is assigned sequentially in the daisy-chain running from 1 to 99, and then finally to Set ID 0.



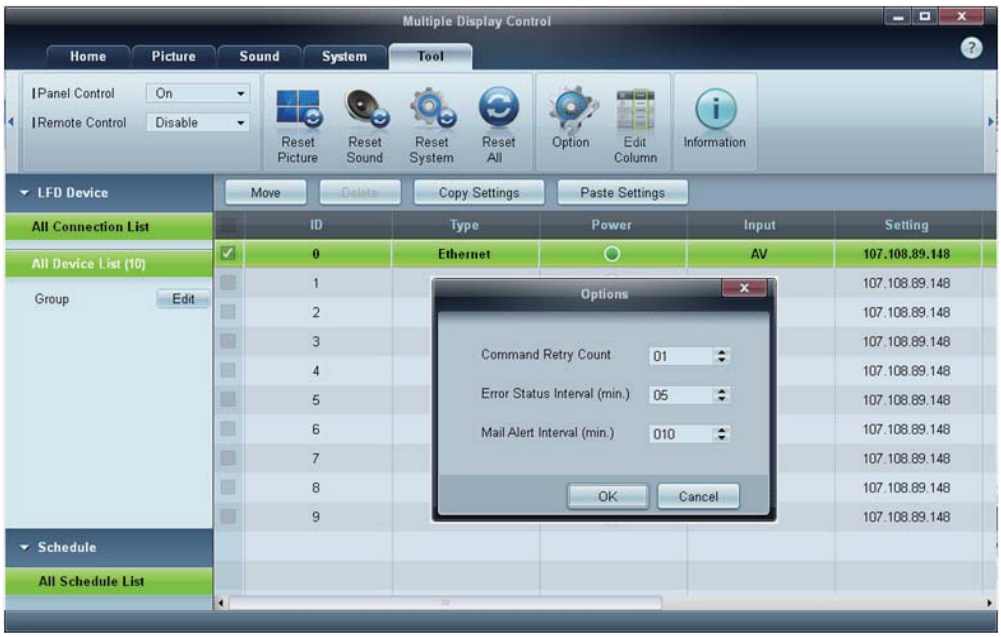
Cloning

Using the Cloning feature, you can copy the setting of one LFD and apply it to multiple selected LFDs. You can select specific tab categories or all tab categories for cloning, using the copy setting option window.



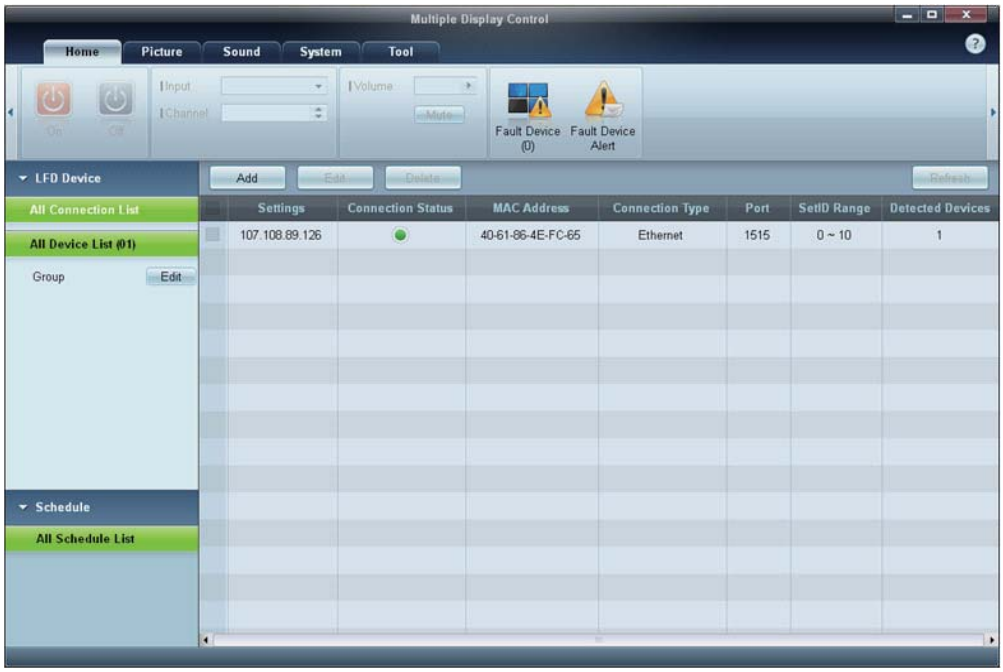
Command Retry

This feature is used to specify the maximum number of times the MDC command will be retried in case of there being no reply or a corrupted reply from an LFD. The retry count value can be set using the MDC options window. The retry count value must be between 1-10. The default value is 1.



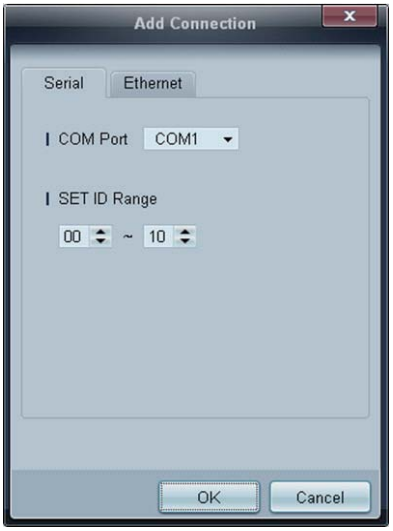
Getting Started with MDC

1 To start the program, click **Start** → **Programs** → **Samsung** → **MDC Unified**.

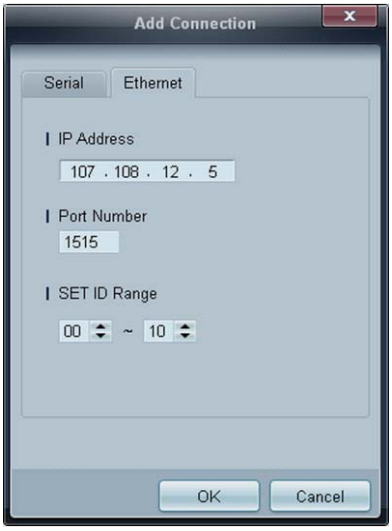


2 Click **Add** to add a display device.

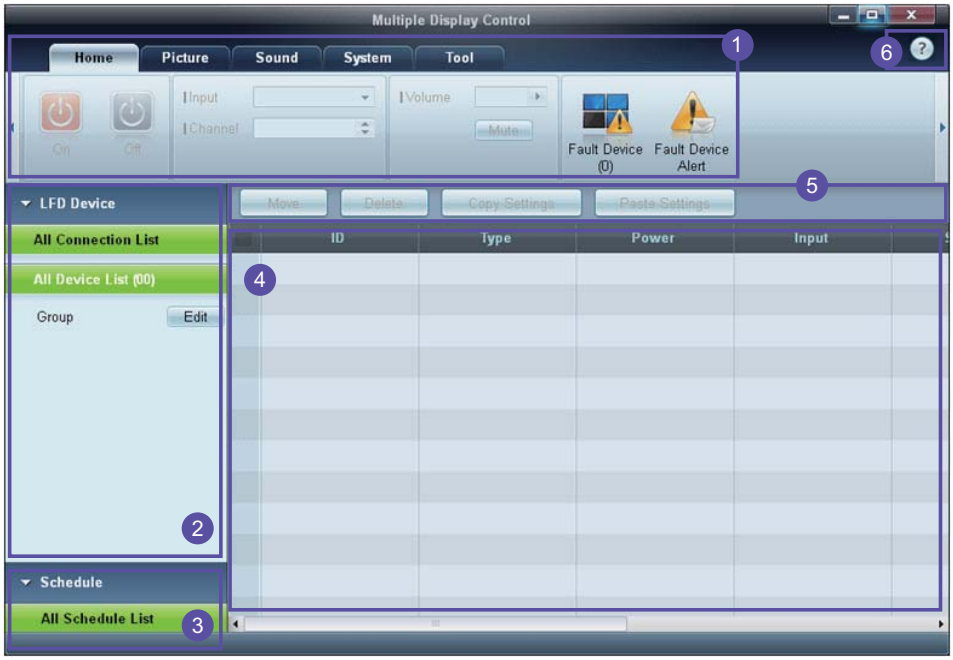
- If the connection is established via RS232C, go to **Serial** and specify the **COM Port**.



- If the connection is established via **Ethernet**, enter the IP that was entered for the display device.



Main Screen Layout



1 Menu Bar	Change the status of a display device or the properties of the program.
2 Device Category	View a list of connected display devices or device groups.
3 Schedule Category	View a list of schedules for display devices.
4 Set List	Select the display device you want to adjust.
5 Modify the Set List	Add, edit, regroup or delete sets.
6 Help Topics	Display help topics for the program.

Menus

You can power on or off a selected device or change the input source or volume of the device.

Choose display devices from the list of sets, and select the **Home** tab.



1 Home

Select an item and change the corresponding setting.

Power

- **On**: Power on a selected display.
- **Off**: Power off a selected dis

Input

- Input Source : Change the input source.

  - Input sources available can vary depending on the Display Device Models.
  - The input source can be changed only for displays that are turned on.

- **Channel** : Change the channel.

  - The TV channel can be changed by using the up/down arrow keys.
  - The channel can be changed only when the input source is **TV**.
  - Only registered channels can be selected.

2 Volume

The volume can be changed or the sound can be muted only for displays that are turned on.

Volume

- The volume can be adjusted using the slider bar in the range of 0 to 100.

  Adjust the volume of a selected display.

Input

- Enable or disable **Mute** for a selected display.

  Mute will automatically be disabled if **Volume** is adjusted when **Mute** is on.

3 Alert

- **Fault Device**

- This menu shows a list of display devices which have following errors - fan error, temperature error, brightness sensor error, or lamp error.

  Select a display device from the list. The **Repair** button will be enabled. Click the refresh button to refresh the error status of the display device. The recovered display device will disappear from the **Fault Device List**.

Fault Device Alert

- Display device in which error is detected will be reported by email.

  Fill in all required fields. The **Test** and **OK** buttons will be enabled. Ensure the **Sender** information and at least one **Recipient** are entered.

Screen Adjustment

The screen settings (contrast, brightness, etc.) can be adjusted.

Choose display devices from the list of sets, and select the **Picture** tab.

Custom

Select an item and change the corresponding screen setting.



- **Color** and **Tint** are not available if the input source is **PC**.
- **Red**, **Green**, **Blue** and **PC Screen Adjustment** are not available if the input source is **Video**.
- **Color**, **Tint**, **Color Tone**, **Color Temp**, **Red**, **Green**, **Blue** and **PC Screen Adjustment** are not available if both **PC Source** and **Video Source** are selected.

Contrast

- Adjust the contrast for the selected display device.

Brightness

- Adjust the brightness for the selected display device.

Color

- Adjust the colors for the selected display device.

Tint (G/R)

- Adjust the tint for the selected display device.

Color Tone

- Adjust the background color tone for the selected display device.

Color Temp

- Adjust the color temperature for the selected display device.

  This option is enabled if **Color Tone** is set to **Off**.

Red

- Customize the intensity of red color for the selected display device.

Green

- Customize the intensity of green color for the selected display device.

Blue

- Customize the intensity of blue color for the selected display device.

Options



Dynamic Contrast

Adjust the **Dynamic Contrast** for the selected display device.

Gamma Control

Change the gamma value for the selected display.

Auto Motion Plus

This option is used to view dynamic images.

- **Off**: Disable the **Auto Motion Plus** function.
- **Clear**: Set the level of **Auto Motion Plus** to clear. This mode is suitable to display vivid images.
- **Standard**: Set the level of **Auto Motion Plus** to standard.
- **Smooth**: Set the level of **Auto Motion Plus** to smooth. This mode is suitable to display smooth images.
- **Custom**: Customize the level of screen burn-in or flickering.
- **Demo**: This function demonstrates the technology of **Auto Motion Plus**. The result when the mode is changed can be previewed on the left side of the window.

Auto Motion Plus may not be available depending on the product.

Brightness Sensor

Enable or disable the **Brightness Sensor** for the selected display device.

The **Brightness Sensor** detects the ambient light intensity and automatically adjusts the screen brightness.

Brightness Sensor may not be available depending on the product.

Size



Picture Size

Adjust the screen size for the selected display device.

The **Detail** item will be disabled if **Picture Size** is set to a mode that does not support detailed configuration.

The -/+ buttons can be used to adjust **Zoom**.

The screen can be relocated using the up/down/left/right buttons.

Detail

You can view details of the selected screen size.

PC Screen Adjustment

Frequency adjustment or fine-tuning is available by using the -/+ buttons in **Coarse** or **Fine**.

To relocate the screen, click one of the four images below **Position**.

To automatically adjust the frequency, fine-tune or relocate the screen, click **Auto Adjustment**.

Sound Adjustment

You can change the sound settings.

Choose display devices from the list of sets, and select the **Sound** tab.



The **Bass** or **Treble** item will be disabled if the item is not supported by the selected set.

Bass

Adjust the bass for the selected display.

Treble

Adjust the treble for the selected display.

Balance (L/R)

Adjust the volume of the left and right speakers of the selected display device.

SRS TS XT

Enable or disable the **SRS TS XT** effect for the selected display device.

System Setup

Choose display devices from the list of sets, and select the **System** tab.

Video Wall

The **Video Wall** function can be used to display part of a whole picture or repeat the same picture on each of connected multiple display devices.

Video Wall is enabled only when devices are in the group.

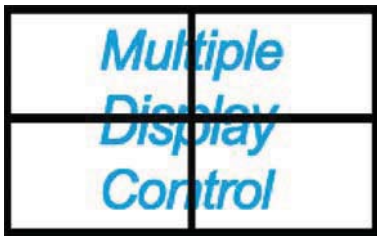


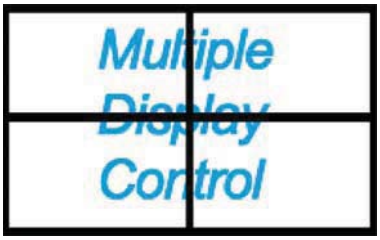
Video Wall

Enable or disable **Video Wall**.

Format

Select the format to display the split screen.







Full



Natural

H

Select the number of horizontal display devices.

A maximum of 15 displays can be arranged in a row.

A maximum of 6 can be assigned to V if 15 is assigned to H.

V

Select the number of vertical display devices.

A maximum of 15 displays can be arranged in a row.

A maximum of 6 can be assigned to V if 15 is assigned to H.

Screen Position

View the layout of displays (configured by the screen divider) or change the layout as required.

Screen Position and **Preview** are enabled when **Video Wall** is set to on.

Note that if multiple sets are selected, **Preview** is enabled only if the settings for H and V match the layout of the selected sets.

To change the **Position**, select a set and drag it to a new position.

The range of screen divider settings may differ depending on the model.

PIP

Basic information required to adjust **PIP** will appear in the menu screen.

- **PIP** will be disabled when **Video Wall** is **ON**.
- Note that **Picture Size** is disabled when **PIP** is **ON**.



PIP Size

View the **PIP Size** of the current display.

PIP Source

Select a PIP input source.

Sound Select

Select and enable the sound from either the primary screen or secondary screen.

Channel

The channel can be changed if **PIP Source** is **TV**.

General



User Auto Color

Automatically adjust the screen colors.

Available only in **PC** mode.

Auto Power

Set the product to automatically power on.

Standby Control

Set the standby mode to activate if an input source is not detected.

Fan & Temperature



Configure the settings required to detect the fan speed and internal temperature for the product's protection.

Fan Control

Select a method to configure the fan speed.

Fan Speed

Configure the fan speed.

Temperature

Detect the internal temperature by specifying the range of temperature.

Security



Safety Lock

Lock the on-screen menus.

To unlock the menus, set **Safety Lock** to **Off**.

Button Lock

Lock the buttons on the display device.

To unlock the buttons, set **Button Lock** to **Off**.

OSD Display



Source OSD

Select whether to display a message when the **Source** is changed.

Not Optimum Mode OSD

Select whether to display a message when a non-compatible mode is selected.

No Signal OSD

Select whether to display a message when there is no input signal.

MDC OSD

Select whether to display a message when settings are changed by the MDC.

Time



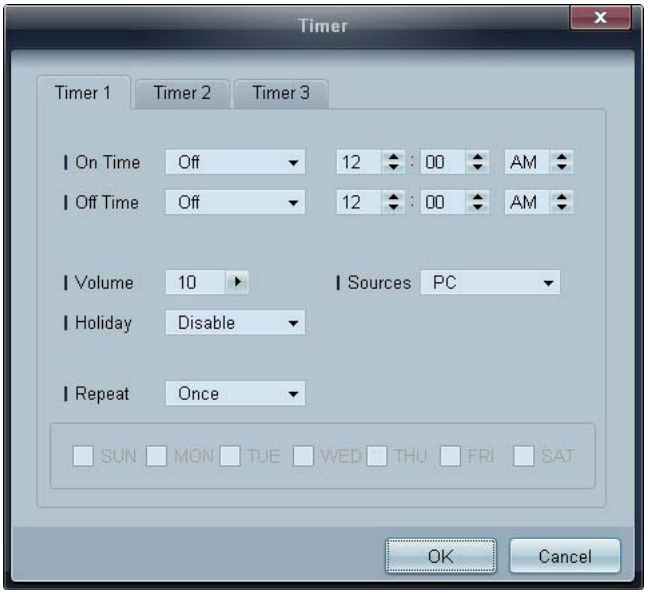
Clock Set



Change the current time on the selected display device according to the time set on a PC.

If the time is not set on the display device, null values will be displayed.

Timer



- **On Time**: Set the time to power on the selected display device.
- **Off Time**: Set the time to power off the selected display device.
- **Volume**: Specify the volume of the display device when it is powered on by **On Time**.
- **Source**: Specify the input source of the display device when it is powered on by **On Time**.
- **Holiday**: The **Holiday Management** settings can be applied to the **Timer**.
- **Repeat** : Specify the period for which you want to repeat the selected **Timer**.

- Once
- EveryDay
- Mon~Fri
- Mon~Sat
- Sat~Sun
- Manual

Holiday Management

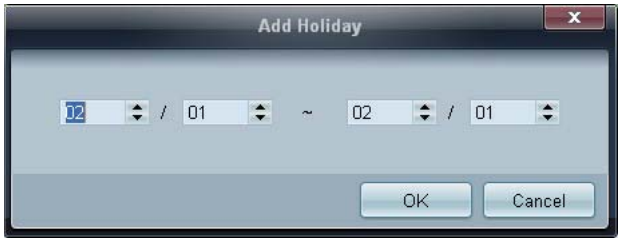
Holiday Management allows you to prevent devices that are set to be powered on by the **Timer** from turning on at a specified date.

The **Holiday Management** function can be enabled or disabled in the **Timer** settings menu.



- **Add**: You can specify holidays:

  Click the **Add** button in the **Holiday Management** window.

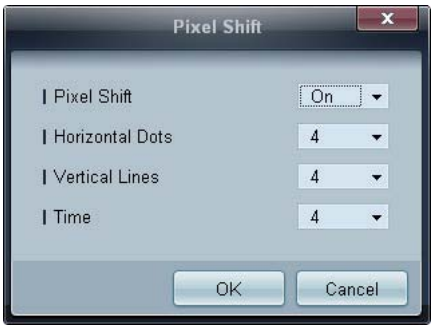


- **Delete**: Delete holidays: check the corresponding checkboxes and click this button.
- List of holidays: View a list of holidays you have added.

Screen Burn Protection



Pixel Shift



Move the screen slightly at specified time intervals to prevent screen burn-in.

Screen Saver



This function prevents screen burn-in when the screen of the selected display device is left idle for an extended period of time.

- **Interval**: Set the interval to activate the **Screen Saver**.
- **Mode**: The **Time** setting can vary for each **Mode**.

Safety Screen



The **Safety Screen** function can be used to prevent screen burn-in when a stationary image displays on the screen of a display device for an extended period of time.

Lamp Control

Lamp Control is used to adjust the backlight to reduce power consumption.



Automatically adjust the backlight of the selected display device at a specified time.

If **Manual Lamp Control** is adjusted, **Auto Lamp Control** will automatically switch to **Off**.

Manually adjust the backlight for the selected display.

If **Auto Lamp Control** is adjusted, **Manual Lamp Control** will automatically switch to **Off**.

- **Ambient Light**: **Ambient Light** detects ambient light intensity and automatically adjusts the screen brightness of all the LFDs in the same serial chain.

Tool Settings



1 Security

Panel Control

Turn on or off the screen of a display device.

Remote Control

Enable or disable the remote control.

2 Reset

Reset Picture

Reset the screen settings.

Reset Sound

Reset the sound settings.

Reset System

Reset the system settings.

Reset All

Reset the screen, sound and system settings at the same time.

3 Edit Column



Select the items you want to display in the list of sets.

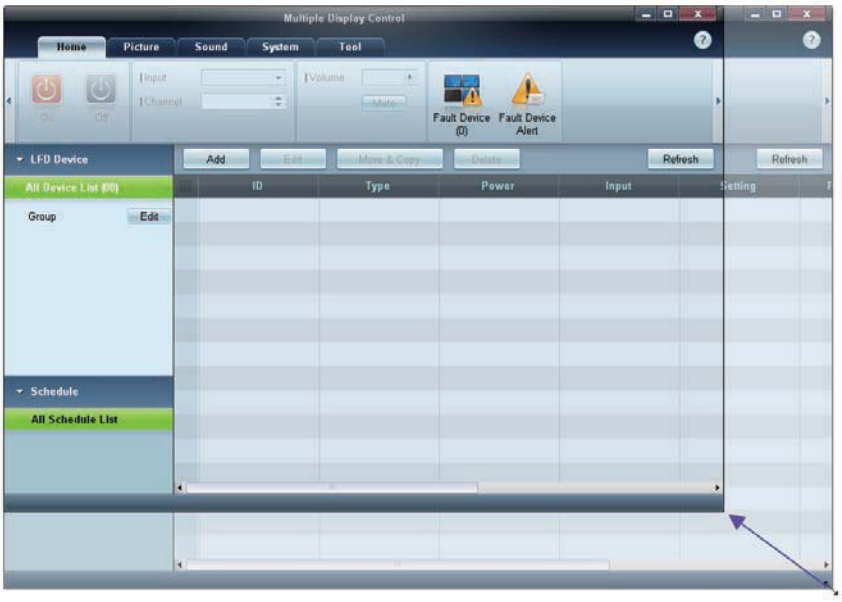
4 Information

View the program information.

Other Functions

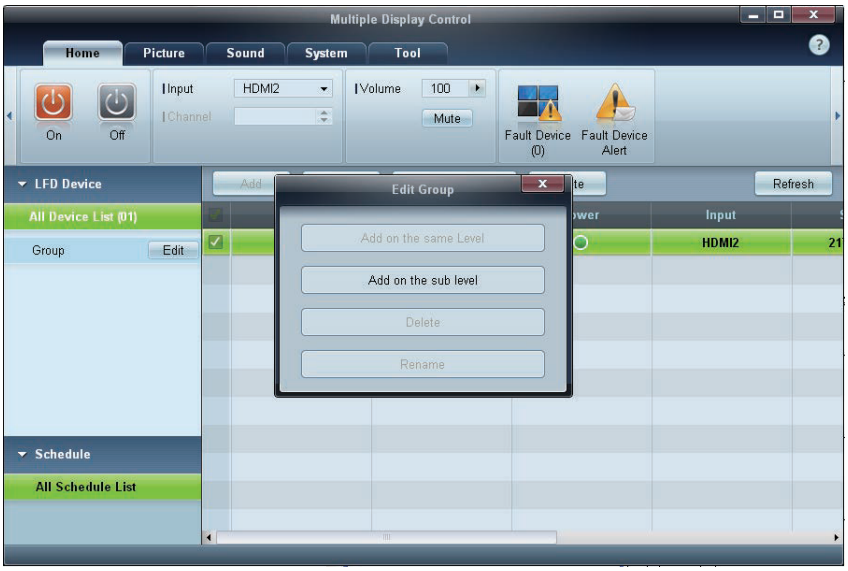
Resizing a Window

Place the mouse pointer on a corner of the program window. An arrow will appear. Move the arrow to customize the size of the program window.



Group Management

Creating Groups



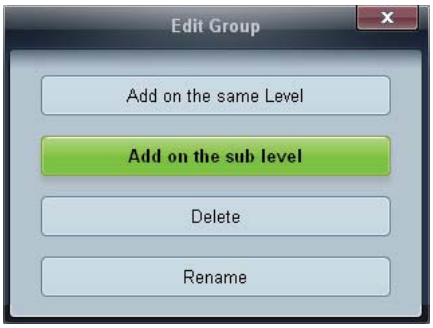
Create groups and manage the list of sets on a group basis.

Duplicate group names cannot be used.

1 Right-click and select **Group>Edit** in the display device list section on the left side of the program window.

2 In the **Edit Group** window displayed, click **Add on the sub level** or **Add on the same level**.

- **Add on the sub level**: Create a sub-group under the selected group.



- **Add on the same level**: Create a group on the same level as the selected group.



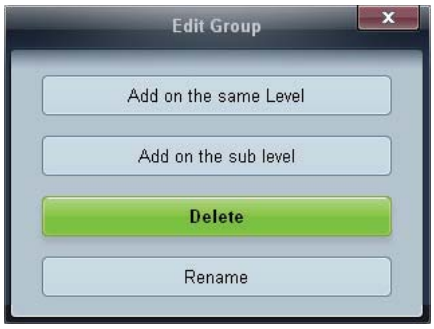
The **Add on the same level** button is enabled only if at least one group is created.

3 Enter the group name.

Deleting Groups

1 Select a group name, and click **Edit**.

2 In the **Edit Group** window displayed, click **Delete**.

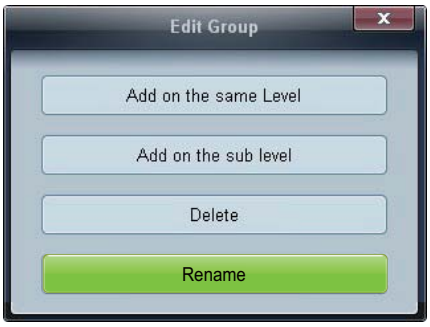


3 Click **Yes**. The group will be deleted.

Renaming Groups

1 Select a group name, and click **Edit**.

2 In the **Edit Group** window displayed, click **Rename**.



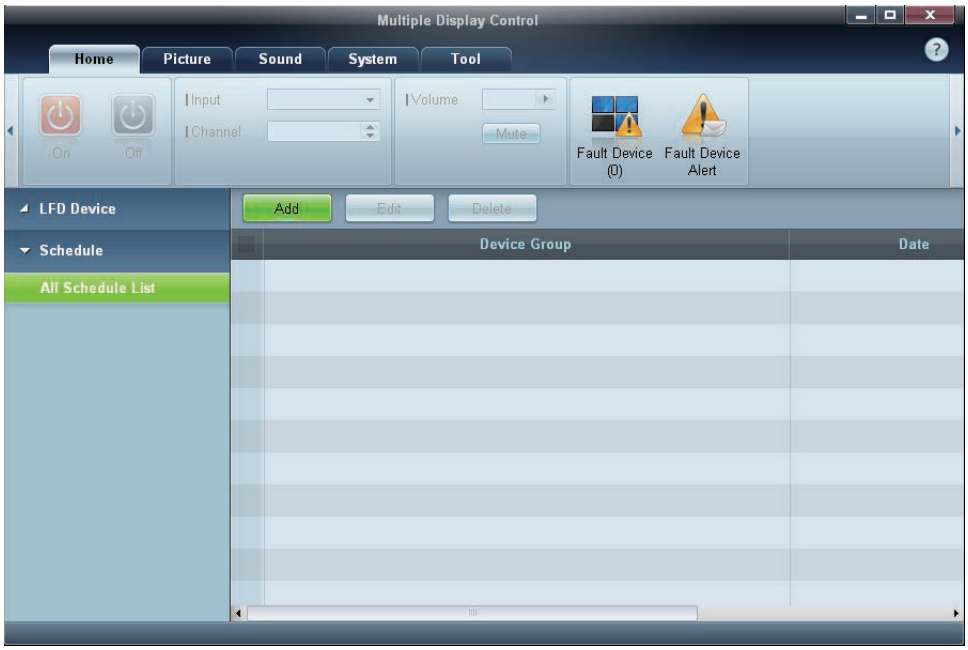
3 If a cursor appears in the old group name, enter a new group name.

Schedule Management

Creating Schedules

Create and register a schedule on a group basis.

1 Click **All Schedule List** in the schedule section on the left side of the program window. The **Add** button will be enabled in the middle.



2 Click the **Add** button. The **Add Schedule** window will appear.



3 Click **Add** below the **Device Group** item, and select the group you want to add a schedule to.



4 Select **Date&Time/Action** and click **OK**. The schedule will be added and a list of schedules will appear in the set list window.

- **Device Group**: Select a group.
- **Date&Time**
  - **Instant Execution**: Run the schedule immediately.
  - **Timer** Set the date, time and interval to run the schedule.
- **Action**: Select a function that will activate at the specified time and interval.

Schedule Modification

To modify a schedule, select the schedule and click **Edit**.

Deleting a Schedule

To delete a schedule, select the schedule and click **Delete**.

Troubleshooting Guide

Issue		Solution
The display you want to control does not appear on the system information chart.	1.	Check the connection of the RS232C cable (check that the cable is properly connected to appropriate serial port).
	2.	Check that another display with a duplicate **ID** is not connected. Connecting displays with a duplicate **ID** can cause the displays not to be shown due to data collision.
	3.	Check that the display **ID** is within the range of 0 and 99. (Change the ID using the Display menu.) For a display that supports the ID in a range of 0 to 99, the **ID** should be set between 0 and 99.
The display you want to control does not appear on the other Control Info Grids.	Check that the display is powered on. (See the power status in the system information chart.)	
	Ensure you select the input source the display is connected to.	
The following message appears repeatedly. 	Check that the display you want to control is selected.	
Displays power on or off at different time from one another even though **On Time** or **Off Time** is set.	Adjust the time on the PC to synchronize the time between the connected displays.	
The remote control does not work.	The remote control may not work if the RS-232C cable is removed or the program is closed abnormally while the **Remote Control** function is **Disable**. To resolve this, run the program again and set **Remote Control** to **Enable**.	

This program may malfunction sometimes due to a communication problem between the PC and display or electromagnetic waves emitted from nearby electronic devices.

How display properties are shown when multiple displays are used

1. When no display is selected: The default value is displayed.
2. When one display is selected: Settings for the selected display are displayed.
3. When two displays are selected (e.g. in sequence of **ID** 1 and**ID** 3): The settings for **ID** 1 are displayed before the settings for **ID** 3.
4. When the **All**+**Select** checkbox is checked and all displays are selected: The default settings are displayed.

Adjusting the LCD Display

Input

Available Modes

- **PC / DVI / DisplayPort**
- **AV**
- **Component**
- **HDMI**
- **MagicInfo**

Note

MagicInfo can only be enabled when a network box(sold separately) is connected.

Source List



Use to select **PC**, HDMI or other external input sources connected to the LCD Display. Use to select the screen of your choice.

1. **PC**
2. **DVI**
3. **AV**
4. **Component**
5. **HDMI1**
6. **HDMI2** - Enabled if a network box is connected.
7. **DisplayPort**
8. **MagicInfo** - Enabled if a network box is connected.

Note

The [RGB/COMPONENT IN] port is compatible with a PC or component input.

However, the picture may not display normally if you select an input source different from the actual connected input source.

PIP

Note

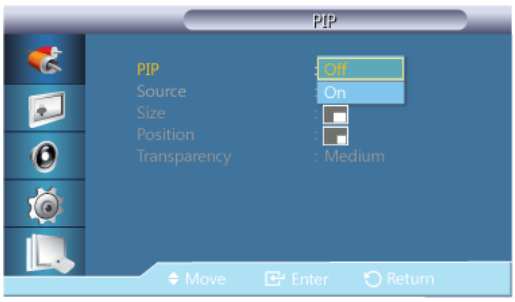
- The **PIP** function is not available when **Video Wall** is **On**.
- The **PIP** function is not available when **Source AutoSwitch** is **On**.

When external AV devices such as VCRs or DVDs are connected to the LCD Display, **PIP** allows you to watch video from those devices in a small window super-imposed on the PC Video signal. (**Off**/**On**)

Note

- PIP turns off when the LCD Display is switched to an external source.
- If you select , , in **Size**, **Position** and **Transparency** will not be activated.

PIP



Turns the **PIP** Screen **Off**/**On**.

- **Off**
- **On**

Source



Selects the input source for the PIP.

Note

PIP is disabled if the primary screen does not receive a signal.

- **PC** : **DVI**, **AV**, **HDMI1**, **HDMI2**, **DisplayPort**
- **DVI** : **PC**
- **AV** : **PC**
- **HDMI** : **PC**

- **DisplayPort** : **PC**

Note

HDMI2 is disabled if a network box is connected.

Size



Changes the Size of the PIP window.

Note

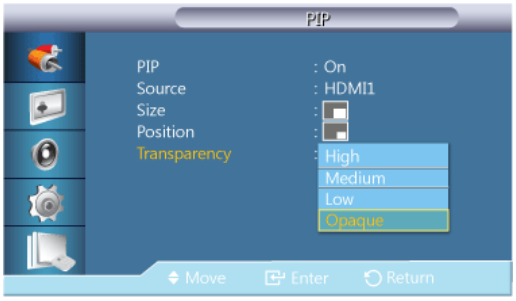
Picture > **Size** will be changed to **16:9** when **PIP** is **On**.

Position



Changes the Position of the PIP window.

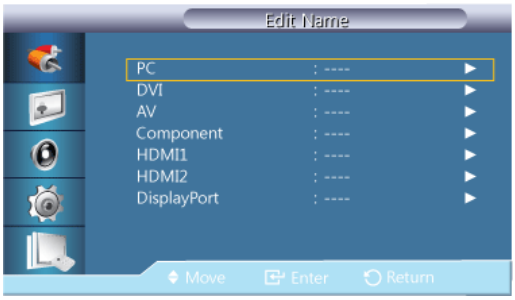
Transparency



Adjusts the Transparency of PIP windows.

- **High**
- **Medium**
- **Low**
- **Opaque**

Edit Name



Name the input device connected to the input jacks to make your input source selection easier.

VCR / **DVD** / **Cable STB** / **HD STB** / **Satellite STB** / **AV Receiver** / **DVD Receiver** / **Game** / **Camcorder** / **DVD Combo** / **DHR** / **PC** / **DVI PC** / **DVI Devices**

Note

- The displayed devices differ depending on the external input mode.
- When connecting a PC to the HDMI terminal, set **Edit Name** to **PC**. In other cases, set **Edit Name** to **AV**. However, since 640x480, 720p (1280x720), and 1080p (1920x1080) are common signals for **AV** and **PC**, make sure to set the **Edit Name** in accordance with the input signal.
- The **Picture** menu changes depending on the input signal and **Edit Name**.

  When using a DVI to HDMI cable connection (which does not support audio and video at the same time), the audio port should be connected via a separate audio cable.
- When a PC is connected, set **Edit Name** to **DVI PC** to enjoy the video and audio from the connected PC.
- When an AV device is connected, set **Edit Name** to **DVI Device** to enjoy the video and audio from the connected AV device.

Source AutoSwitch Settings

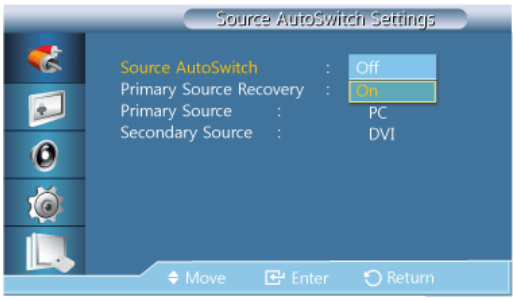
Turning on the display with **Source AutoSwitch On**, and the previous video source selection is not active, the display will automatically search the different video input sources for active video.

Note

- **Source AutoSwitch** selection and **PIP** function: If the **Source AutoSwitch** selection is set to **On**, the **PIP** function will not work, the **Source AutoSwitch** selection must be set to **Off**, for the **PIP** feature to work.
- When the **Source AutoSwitch** selection is **On**, and or the **Primary Source Recovery** is **On**, the display power saving mode becomes inactive.
- When **Primary Source Recovery** is **On**, only the **Primary Source** and **Secondary Source** selection are available and they are interchangeable and selectable at will.

  Refer to **PIP** > **Source** for compatible signals for each primary input source.

Source AutoSwitch



When the **Source AutoSwitch** is **On**, the display video source will automatically be searched for active video.

The **Primary Source** selection will be activated, if the current video source is not recognized. **Secondary source** selection will become active, if no primary video source is available. If the primary or secondary source is not recognized, the display will search again, if no active video is found the display will show the no-input-signal message.

When the **Primary Source** selection is set to **All**, the display will search all the video source inputs twice in sequence looking for an active video source, returning back to the first video source in the sequence if no video is found.

1. **Off**
2. **On**

Primary Source Recovery

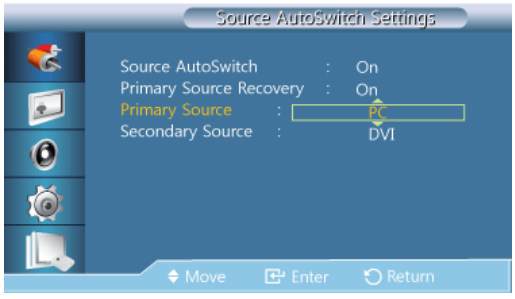


When **Primary Source Recovery** is **On**, only the **Primary Source** and **Secondary Source** video source selection will be searched for active video.

The **Primary Source** will be selected if active video is found, if no video is found, the **Secondary Source** will be selected, if no video is found in **Secondary Source** again, the no-input-signal is displayed.

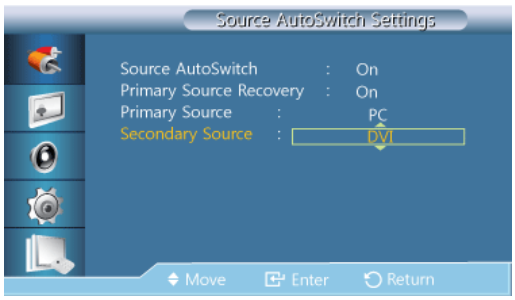
1. **Off**
2. **On**

Primary Source



Specify **Primary Source** for the automatic input source.

Secondary Source



Specify **Secondary Source** for the automatic input source.

Picture [PC / DVI / DisplayPort / MagicInfo Mode]

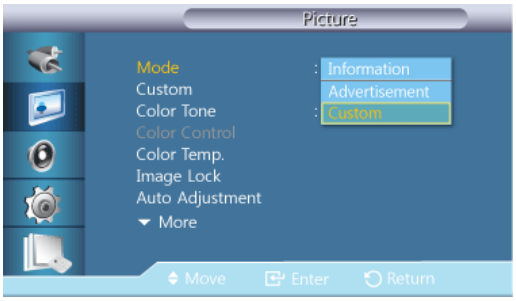
Available Modes

- **PC / DVI / DisplayPort**
- **AV**
- **Component**
- **HDMI**
- **MagicInfo**

Note

MagicInfo can only be enabled when a network box(sold separately) is connected.

Mode



Note

Not available when **Dynamic Contrast** is set to **On**.

1. **Information**

   Recommended for communicating exact information (e.g. public information).

2. **Advertisement**

   Recommended for displaying advertisements (e.g. videos or indoor or outdoor ads).

3. **Custom**

Custom PM

By using the on-screen menus, the contrast and brightness can be changed to your personal preference.

Note

- By adjusting the picture using the **Custom** function, **MagicBright** will change to **Custom** mode.
- Not available when **Dynamic Contrast** is set to **On**.

1. **Contrast**



Adjusts the Contrast.

2. **Brightness**



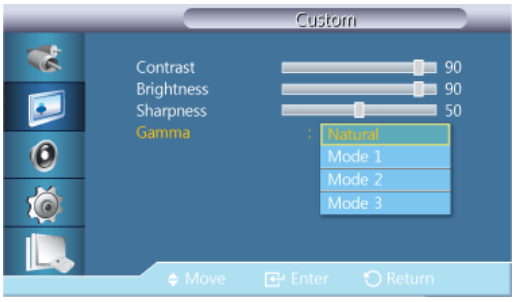
Adjusts the Brightness.

3. **Sharpness**



Adjusts the Sharpness.

4. **Gamma**



Adjust the mid-range brightness (Gamma) for the picture.

- **Natural**
- **Mode 1** - Sets the picture brighter than **Natural**.
- **Mode 2** - Sets the picture darker than **Mode1**.
- **Mode 3** - Increases the contrast between dark and bright colors.

Color Tone PM



Note

Not available when **Dynamic Contrast** is set to **On**.

The Color tones can be changed.

1. **Off**
2. **Cool**
3. **Normal**
4. **Warm**
5. **Custom**

Note

- If you set the **Color Tone** to **Cool**, **Normal**, **Warm**, or **Custom**, the **Color Temp.** function is disabled.
- If you set the **Color Tone** to **Off**, the **Color Control** function is disabled
- By adjusting the picture using the **Color Tone** function, **Mode** will change to **Custom** mode.

Color Control PM

Adjusts individual Red, Green, Blue Color balance.

Note

Not available when **Dynamic Contrast** is set to **On**.

1. **Red**



2. **Green**



3. **Blue**



Color Temp. PM



Color Temp. is a measure of the 'warmth' of the image Colors.

Note

This function is enabled when **Mode** is set to **Custom**, and **Dynamic Contrast** and **Color Tone** are **Off**.

Image Lock P

Image Lock is used to fine-tune and get the best image by removing noise that creates unstable images with jitters and shakiness. If satisfactory results are not obtained using the Fine adjustment, use the Coarse adjustment and then use Fine again.

Note

Available in **PC** mode only.

Coarse



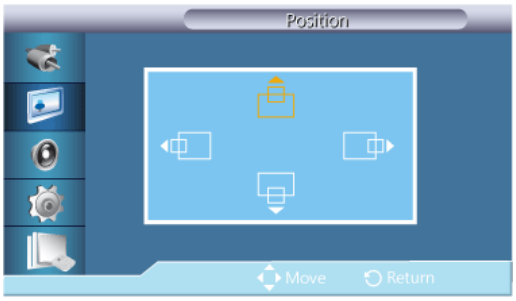
Removes noise such as vertical stripes. Coarse adjustment may move the screen image area. You may relocate it to the Center using the horizontal control menu.

Fine



Removes noise such as horizontal stripes. If the noise persists even after Fine tuning, repeat it after adjusting the frequency (clock speed).

Position



Adjusts the screen location horizontally and vertically.

Auto Adjustment P



The values of **Fine**, **Coarse**, **Position** are adjusted automatically. By changing the resolution in the control panel, the auto function is performed.

Note

Available in **PC** mode only.

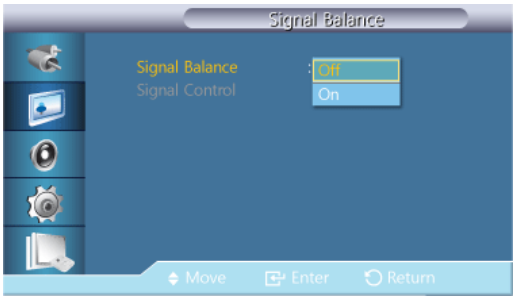
Signal Balance P

This is used to make up for the weak RGB signal transmitted by a long signal cable.

Note

- Not available when **Dynamic Contrast** is set to **On**.
- Available in **PC** mode only.

Signal Balance



Selects either **On** or **Off** with the signal balance.

Signal Control

Note

Available when **Signal Balance** is set to **On**.

1. **R-Gain**



2. **G-Gain**



3. **B-Gain**



4. **R-Offset**



5. **G-Offset**



6. **B-Offset**



Size



The **Size** can be switched.

1. **16:9**
2. **4:3**

Note

Size will change to **16:9** if **PIP** mode is active.

HDMI Black Level



Selects the black level on the screen to adjust the screen depth.

1. **Normal**
2. **Low**

Note

Available only in **HDMI** mode.

PIP Picture

Adjusts the PIP Screen Settings.

Note

- Available Modes: **PIP On**

1. **Contrast**



Adjusts the Contrast of the PIP window on the screen.

2. **Brightness**



Adjusts the Brightness of the PIP window on the screen.

3. **Sharpness**



Adjusts the Sharpness of the PIP window on the screen.

4. **Color**



Adjusts the Color of the PIP window on the screen.

Note

PIP input only operates in **AV**, **HDMI** mode.

5. **Tint**

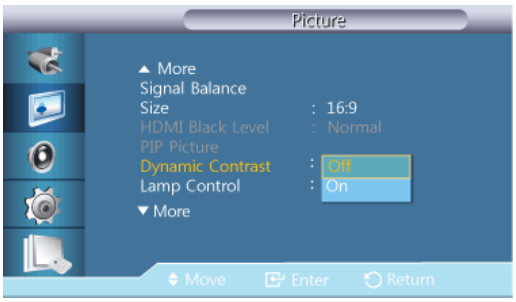


Adds a natural tone to the PIP window.

Note

The **Tint** slider is only displayed when **PIP** input source is **HDMI** or **AV**.

Dynamic Contrast PM



Dynamic Contrast automatically detects the distribution of the visual signal and adjusts to create an optimum contrast.

1. **Off**
2. **On**

Note

Disabled when **PIP** is set to **On**.

Lamp Control PM

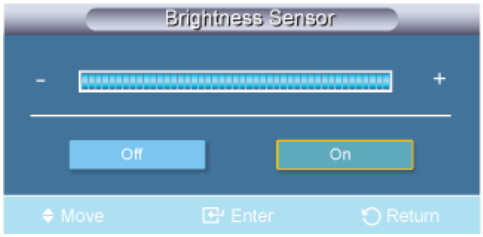


Adjusts the inverter lamp in order to reduce energy consumption.

Note

Not available when **Dynamic Contrast** is set to **On**.

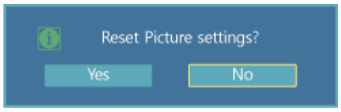
Brightness Sensor P



Brightness Sensor detects the surrounding light intensity and automatically optimizes the screen brightness accordingly.

1. **Off**
2. **On**

Picture Reset PM



Reset the screen settings.

Picture [AV / HDMI / Component Mode]

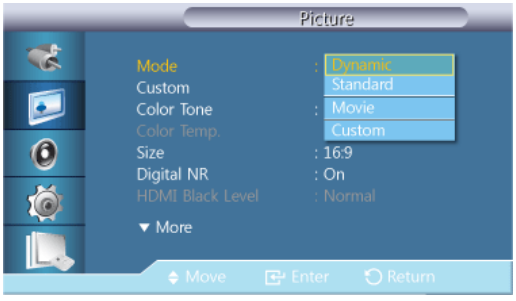
Available Modes

- **PC / DVI / DisplayPort**
- **AV**
- **Component**
- **HDMI**
- **MagicInfo**

Note

MagicInfo can only be enabled when a network box(sold separately) is connected.

Mode AHC



The LCD Display has four automatic picture settings ("**Dynamic**", "**Standard**", "**Movie**" and "**Custom**") that are preset at the factory.

Note

Not available when **Dynamic Contrast** is set to **On**.

1. **Dynamic**
2. **Standard**
3. **Movie**
4. **Custom**

Custom AHC

By using the on-screen menus, the contrast and brightness can be changed to your personal preference.

Note

- By adjusting the picture using the **Custom** function, **MagicBright** will change to **Custom** mode.
- Not available when **Dynamic Contrast** is set to **On**.

Contrast



Adjusts the Contrast.

Brightness



Adjusts the Brightness.

Sharpness



Adjusts the picture Sharpness.

Color



Adjusts the picture Color.

Tint



Adds a natural tone to the display.

Note

The tint slider is only displayed when input source is **HDMI** or **AV**.

Color Tone



The Color tones can be changed. The individual Color components are also user adjustable.

Note

Not available when **Dynamic Contrast** is set to **On**.

1. **Off**
2. **Cool2**
3. **Cool1**
4. **Normal**
5. **Warm1**
6. **Warm2**

Note

- If you set the **Color Tone** to **Cool2**, **Cool1**, **Normal**, **Warm1**, or **Warm2**, the **Color Temp.** function is disabled.
- By adjusting the picture using the **Color Tone** function, **Mode** will change to **Custom** mode.

Color Temp.



Color Temp. is a measure of the 'warmth' of the image Colors.

Note

This function is enabled when **Mode** is set to **Custom**, and **Dynamic Contrast** and **Color Tone** are **Off**.

Size



The **Size** can be switched.

PC mode(PC, HDMI[PC Timing]): **16:9 - 4:3**

Video mode (**HDMI** [Video Timing], **AV** or **Component**): **16:9 - Zoom1 - Zoom2 - 4:3 - Screen Fit - Custom**

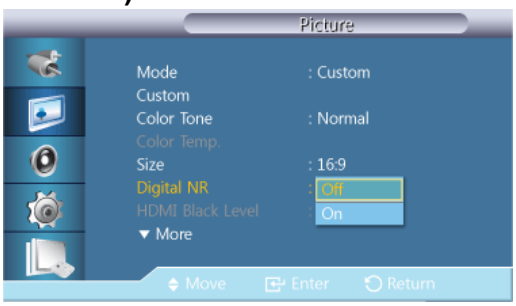
1. **16:9** - Sets the picture to 16:9 wide mode.
2. **Zoom 1** - Magnifies the size of the picture on the screen.
3. **Zoom 2** - Magnifies the size of the picture more than **Zoom 1**.
4. **4:3** - Sets the picture to 4:3 normal mode.
5. **Screen Fit** - Displays the input scenes as they are without any cutoff when HDMI 720p, 1080i, 1080p signals are input.

6. **Custom** - Changes the resolution to suit the user's preferences.

Note

- Certain external devices may feed the display an out of spec signal that may cause cutoff even when using the **Screen Fit** feature.
- **Zoom 1** and **Zoom 2** are not available in **HDMI** mode.
- **Screen Fit** is enabled for only 1080i/p in **Component** mode and for 1080i/p or 720p in **HDMI** mode.
- **Zoom 1** and **Zoom 2** are disabled for HD signals (1080i/p, 720p or 768p).
- The **Position** and **Reset** functions are available in **Zoom 1** or **Zoom 2** modes.
- **Size** will change to **16:9** if **PIP** mode is active.

Digital NR (Digital Noise Reduction) A H C



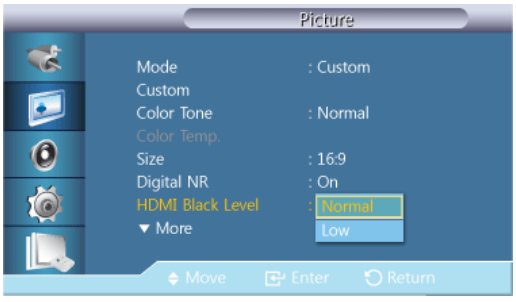
Turns the Digital Noise Reduction feature **Off**/**On**. The Digital Noise Reduction feature allows you to enjoy clearer and crisper images.

1. **Off**
2. **On**

Note

Digital NR function is not available for all resolutions.

HDMI Black Level H



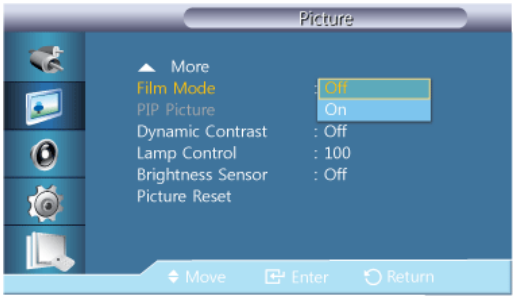
Selects the black level on the screen to adjust the screen depth.

1. **Normal**
2. **Low**

Note

Available only in **HDMI** mode.

Film Mode A C H



Film Mode calibrates unnatural pictures that may occur in a movie (which is in 24 frames).

Moving subtitles may appear corrupted when this mode is enabled.

(In **HDMI** mode, this function is available when the input signal is interlaced scan; it is not available in progressive scan.)

1. **Off**
2. **On**

PIP Picture A H

Adjusts the **PIP** Screen Settings.

Note

Available Modes: **PIP On**

1. **Contrast**



Adjusts the Contrast of the PIP window on the screen.

2. **Brightness**



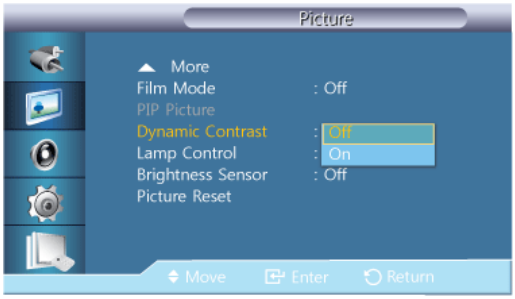
Adjusts the Brightness of the PIP window on the screen.

3. **Sharpness**



Adjusts the Sharpness of the PIP window on the screen.

Dynamic Contrast AHC



Dynamic Contrast automatically detects the distribution of the visual signal and adjusts to create an optimum contrast.

1. **Off**
2. **On**

Note

This function is disabled when **PIP** or **Energy Saving** is **On**.

Lamp Control AHC

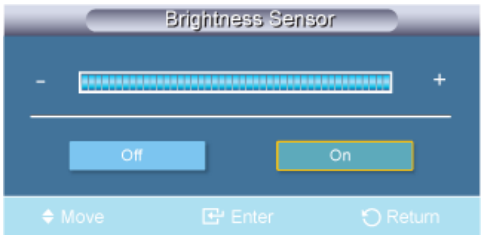


Adjusts the inverter lamp in order to reduce energy consumption.

Note

Not available when **Dynamic Contrast** is set to **On**.

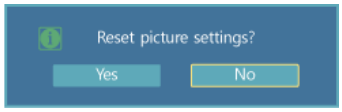
Brightness Sensor AHC



Brightness Sensor detects the surrounding light intensity and automatically optimizes the screen brightness accordingly.

1. **Off**
2. **On**

Picture Reset AHC



Reset the screen settings.

Sound

Available Modes

- **PC / DVI / DisplayPort**
- **AV**
- **Component**
- **HDMI**
- **MagicInfo**

Note

MagicInfo can only be enabled when a network box(sold separately) is connected.

Mode PACHM



The LCD Display has a built-in high fidelity stereo amplifier.

1. **Standard**

   Selects **Standard** for the standard factory settings.

2. **Music**

   Selects **Music** when watching music videos or concerts.

3. **Movie**

   Selects **Movie** when viewing movies.

4. **Speech**

   Selects **Speech** when watching a show that is mostly dialog (i.e., news).

5. **Custom**

   Selects **Custom** if you want to adjust the settings according to your personal preferences.

Custom PACHM

The sound settings can be adjusted to suit your personal preferences.

Note

- You can hear the sound even when sound value is set to 0.

- If you adjust sound using **Custom** function, **Mode** will turn to **Custom** mode.

Bass



Emphasizes low frequency audio.

Treble



Emphasizes high frequency audio.

Balance



Allows you to Adjusts the sound balance between the left and right speakers.

Auto Volume PACHM



Reduces the difference in volume control between broadcasters.

1. **Off**
2. **On**

SRS TS XT PACHM



SRS TS XT is a patented SRS technology that solves the problem of playing 5.1 multichannel content over two speakers. TruSurround XT delivers a compelling, virtual surround sound experience through any two-speaker playback system, including internal television speakers. It is fully compatible with all multichannel formats.

1. **Off**
2. **On**

Sound Select P A H



Enable the sound of either the primary or secondary display in **PIP** mode.

Note

Available when **PIP** is set to **On**.

1. **Main**
2. **Sub**

Speaker Select P A C H M



When you use the product with it connecting to a Home Theater, turn the internal speakers off so you can listen to sound from the Home Theater's (external) speakers.

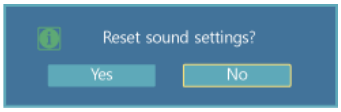
1. **Internal**

   Sound is outputted both from the **Internal** speaker and the **External** speakers, but the volume control is only available from the **Internal** speaker.

2. **External**

   When sound is only outputted from the **External** speakers, the volume control is also only available from the **External** speakers.

Sound Reset P A C H M T



Reset the sound settings.

Setup

Available Modes

- **P PC / DVI / DisplayPort**

- **AV**
- **Component**
- **HDMI**
- **MagicInfo**

Note

MagicInfo can only be enabled when a network box(sold separately) is connected.

Language



You can choose one of 14 languages.

English,Deutsch,Español,Français,Italiano,Svenska,Русский
Português,Türkçe, Polish, 简体中文, 繁體中文, 日本語, 한국어

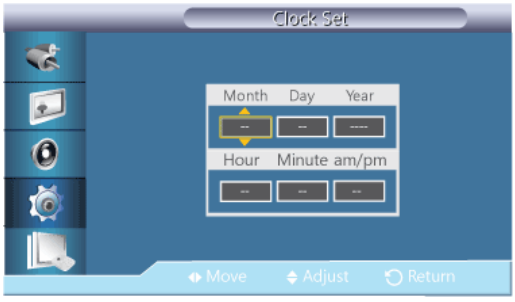
Note

The language chosen affects only the language of the OSD.

Time

Selects from one of 4 time settings, **Clock Set**, **Sleep Timer**, **Timer**, and **Holiday Management**.

Clock Set



Current Time Setting.

Sleep Timer



Turns the LCD Display off automatically at certain times.

1. **Off**
2. **30**
3. **60**
4. **90**
5. **120**
6. **150**
7. **180**

Timer1 / Timer2 / Timer3



You can set the LCD display to automatically turn on or off at a specified time.

Note

- **Holiday** : Select **Apply** to disable the timer on holidays and **Don't Apply** to enable the timer on holidays.
- Only enabled when the clock is set using the **Clock Set** menu.
- The Manual option allows you to select a day of the week.
- **Source** : Selects the external input source that will be displayed when the selected monitor is turned on.
- **Repeat** : Available selections include **Once**, **EveryDay**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun**, and **Manual**.
  - **Once** : The **Timer** goes off only once.
  - **EveryDay** : The **Timer** repeats daily.
  - **Mon~Fri** : The **Timer** repeats from Monday through Friday.
  - **Mon~Sat** : The **Timer** repeats from Monday through Saturday.
  - **Sat~Sun** : The **Timer** goes off on Saturday and Sunday.
  - **Manual** : Select a day of the week you want the Timer to go off.

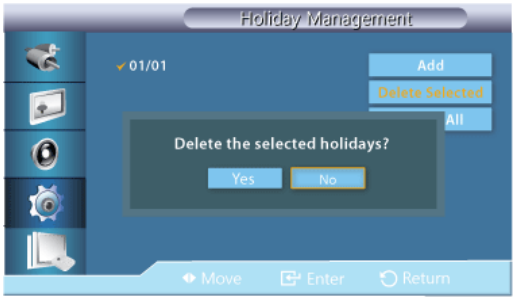
Holiday Management

- **Add**



You can register holidays.

- **Delete Selected**

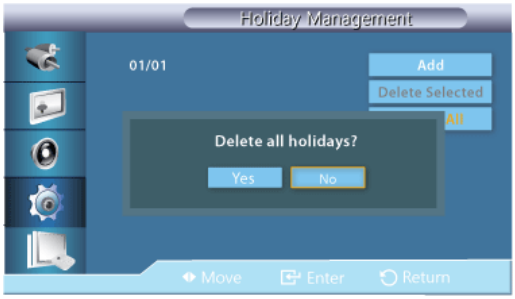


You can delete selected holidays.

Note

- Only enabled when registered holidays are selected.
- More than one holiday can be selected and deleted.

- **Delete All**



You can delete all the registered holidays.

Menu Transparency PACHM

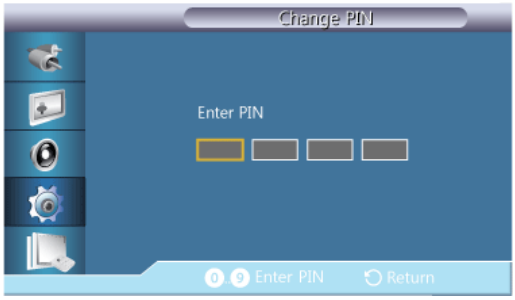


Change the transparency of the background of the OSD.

1. **High**
2. **Medium**
3. **Low**
4. **Opaque**

Safety Lock PACHM

Change PIN



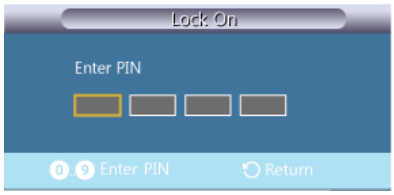
The password can be changed.

The preset password for the LCD Display is "0000".

Note

If you forgot your password, press the remote buttons INFO + EXIT + MUTE to reset the password to "0000."

Lock



This is the function that locks the OSD in order to keep the current settings or to prevent others from adjusting the settings.

Note

Selecting **Lock On** will enable **Lock Off**. To disable the **Lock** function, enter the password for **Lock Off**.

Energy Saving PACHM



This feature adjusts the power consumption of the unit in order to save energy.

1. **Off**

2. **On**

Video Wall PACHM

A **Video Wall** is a set of video screens connected together, so that each screen shows a part of the whole picture or where the same picture is repeated on each screen.

When the **Video Wall** is on, you can adjust the **Video Wall** screen setting.

Note

- When **Video Wall** is running, the **Size** functions are not available.
- Disabled when **PIP** is set to **On**.
- When a **Horizontal** or **Vertical** split is greater than four, use a resolution of XGA 1024 x 768 or greater to prevent any picture degradation.

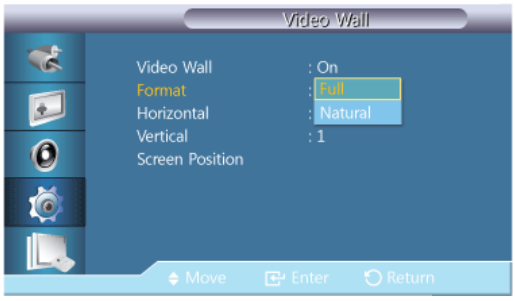
Video Wall



Turns Off/On the **Video Wall** function of the selected display Off/On.

- **Off**
- **On**

Format



The **Format** can be selected to see a divided screen.

- **Full**

  Provides a full screen without any margins.

- **Natural**

  Displays a natural image with the original aspect ratio intact.

Horizontal



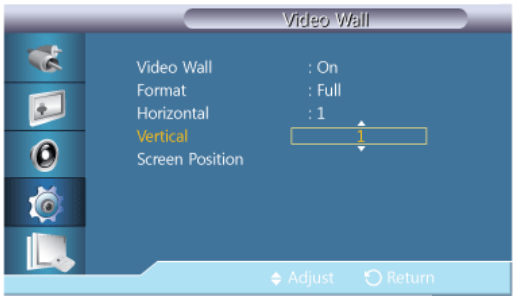
Sets how many parts the screen should be divided horizontally.

Fifteen adjustment levels: 1~15.

Note

If **Vertical** is set to **15**, the maximum value for **Horizontal** is **6**.

Vertical



Sets how many parts the screen should be divided vertically.

Fifteen adjustment levels: 1~15.

Note

If **Horizontal** is set to **15**, the maximum value for **Vertical** is **6**.

Screen Position



The screen can be divided into several images. A number of screens can be selected with a different layout when dividing.

- Select a mode in **Screen Position**.
- Select a display in Display Selection.
- The selection will be set up by pressing a number in the selected mode.
- The screen can be split into a maximum of 100 sub-screens.

Note

When more than four displays are connected, we recommend a resolution of XGA (1024 x 768) or greater to prevent any picture degradation.

Safety Screen

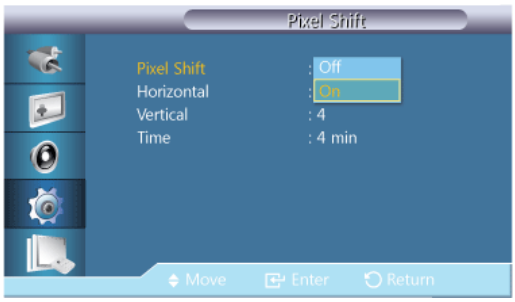
The **Safety Screen** function is used to prevent afterimages that may appear when a still picture is displayed on the screen over a long time.

Note

This function is not available when the power is turned off.

Pixel Shift

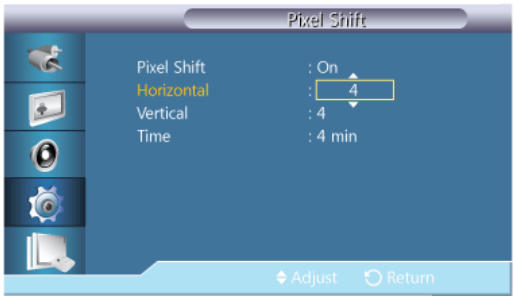
Pixel Shift



To prevent after-images on the screen, you can use this function to have pixels move on the LCD in the horizontal or vertical direction.

- **Off**
- **On**

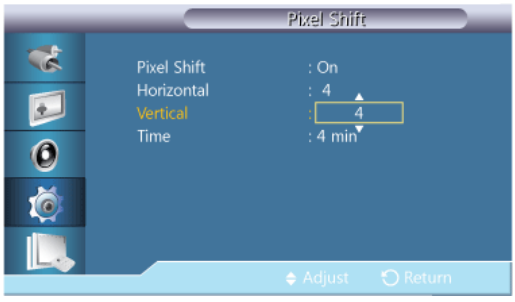
Horizontal



Sets how many pixels the screen moves horizontally.

Five adjustment levels: 0, 1, 2, 3, and 4.

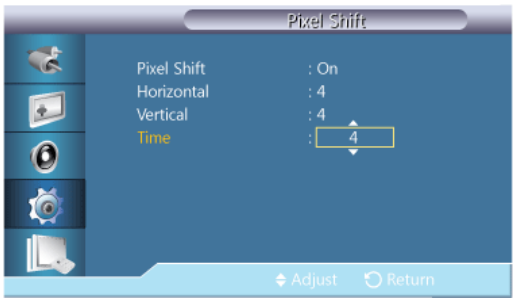
Vertical



Sets how many pixels the screen moves vertically.

Five adjustment levels: 0, 1, 2, 3, and 4.

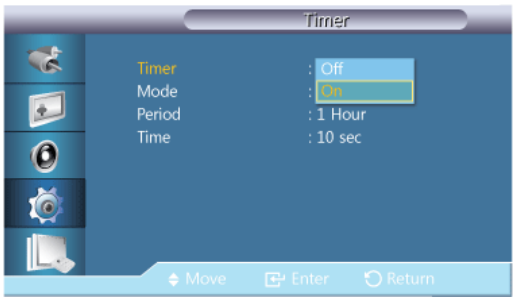
Time



Set the time interval for performing the horizontal or vertical movement, respectively.

Timer

Timer

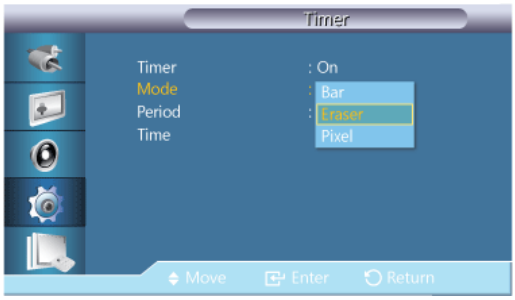


You can set the timer for Screen Burn Protection.

If you start the operation to erase any residual image, the operation will be performed for the set period of time and then automatically finish.

- **Off**
- **On**

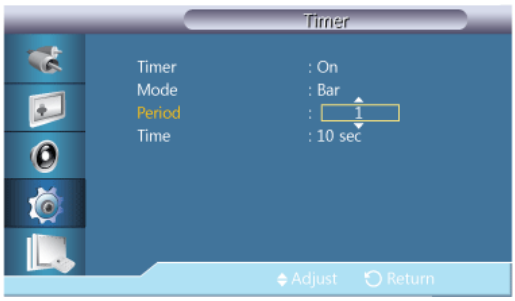
Mode



You can change the **Safety Screen** Type.

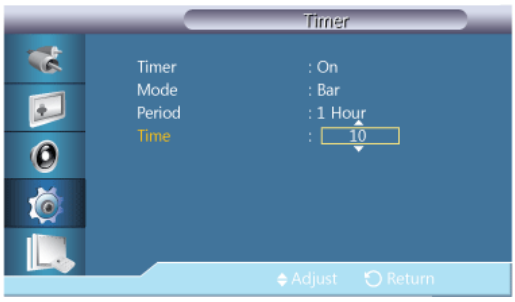
- **Bar**
- **Eraser**
- **Pixel**

Period



Use this function to set the execution period for each mode set in the timer.

Time



Within the set period of time specify a time for execution.

Bar



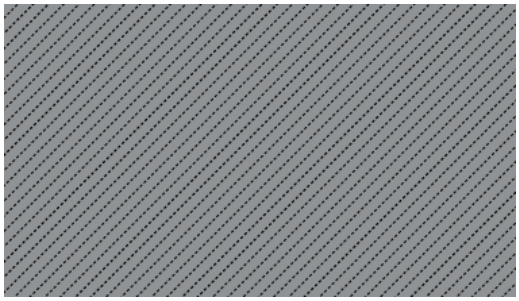
This function prevents after-images on the screen by moving long black and white vertical lines.

Eraser



This function prevents after-images on the screen by moving a rectangular pattern.

Pixel



This function prevents after-images by moving many pixels on the screen.

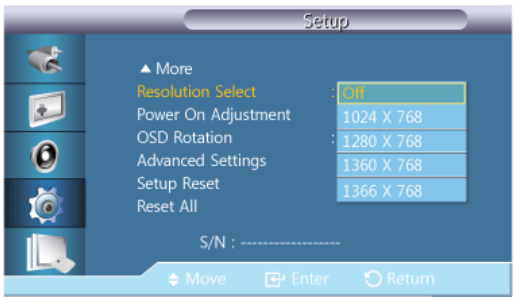
Side Gray



Select the brightness of the grey for the screen background.

- **OFF**
- **Light**
- **Dark**

Resolution Select



When the picture is not displayed properly on the screen when setting the graphics card resolution of the computer to **1024 x 768 @ 60Hz**, **1280 x 768 @ 60Hz**, **1360 x 768@ 60Hz** or **1366 x 768 @ 60Hz**, by using this function(Resolution Select), you can have the picture displayed on the screen in the specified resolution.

Note

Available in **PC** mode only.

1. **Off**
2. **1024 x 768**
3. **1280 x 768**

4. **1360 x 768**

5. **1366 x 768**

Note

Selecting the menu is only allowed when the graphics resolution is set to **1024 x 768 @ 60Hz**, **1280 x 768 @ 60Hz**, **1360 x 768 @ 60Hz** or **1366 x 768 @ 60Hz**.

Power On Adjustment PACHM



Adjusts the Power On time for the screen.

Caution: Set the Power On time to be longer to avoid overvoltage.

OSD Rotation PACHM



OSD Rotate

1. **Landscape**

2. **Portrait**

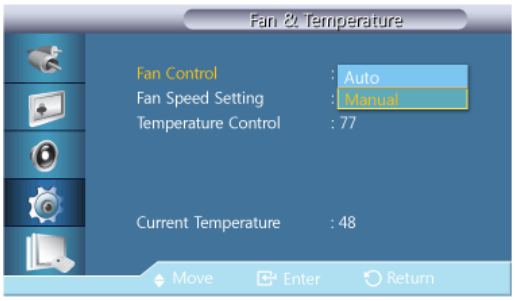
Advanced Settings PACHM

Configures the settings more elaborately.

Fan & Temperature

Protects the product by detecting the fan speed and internal temperature.

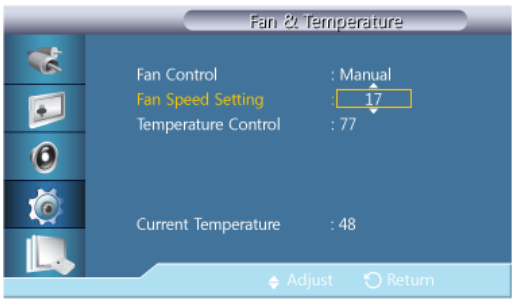
Fan Control



Selects auto or manual for the fan speed settings.

- **Auto**
- **Manual**

Fan Speed Setting

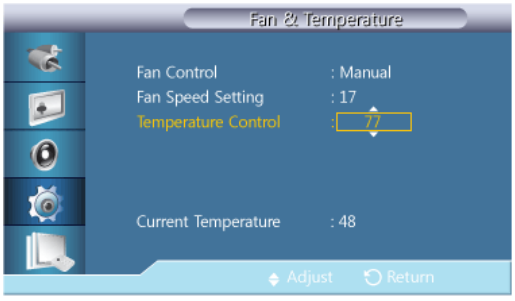


Sets the fan speed within a range of **0** and **100**.

Note

Enabled when **Fan Control** is set to **Manual**.

Temperature Control



Detects the product's internal temperature and specifies the desired temperature.

The product is set to 77 °C by default.

Note

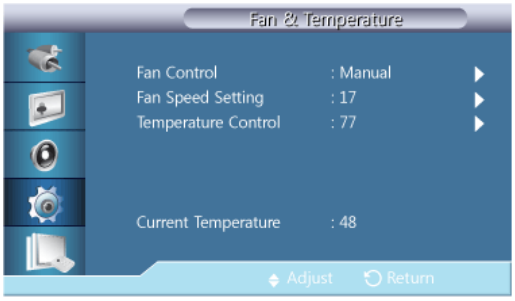
- The picture will be dimmed if the temperature exceeds the specified temperature, and the product will automatically power off to prevent overheating if the temperature keeps rising.
- It is best to use the product at temperatures 75 - 80 °C (based on ambient temperature of 40 °C).

  Refer to "Specifications" herein for details about operating conditions.

Note

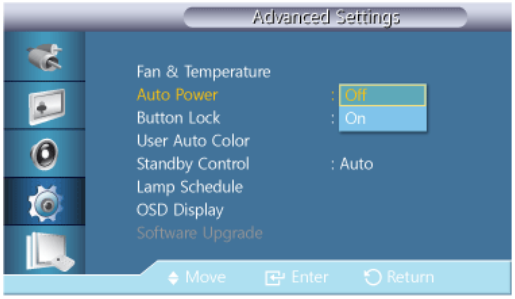
It is best to set **Fan Control** to **Auto** when you change the **Temperature Control** setting.

Current Temperature



Shows the current temperature of the product.

Auto Power



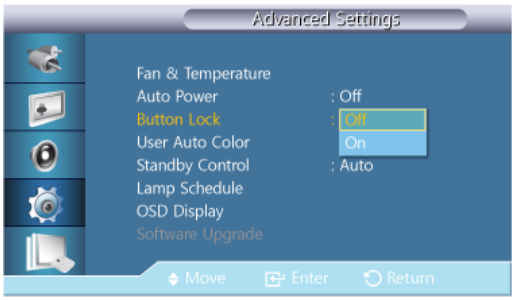
Enables or disables **Auto Power** for the product.

- **Off**
- **On**

Note

When **Auto Power** is **On**, the product will power on automatically as soon as it is connected to power.

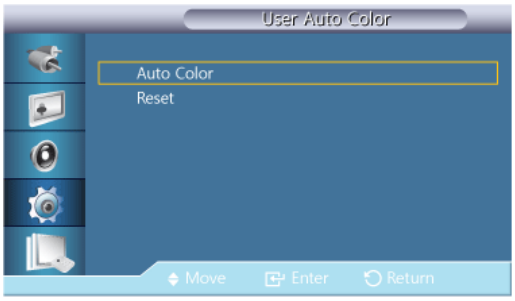
Button Lock



Locks or unlocks the monitor control buttons on the product.

- **Off**
- **On**

User Auto Color



1. **Auto Color**

   Automatically adjusts the Colors.

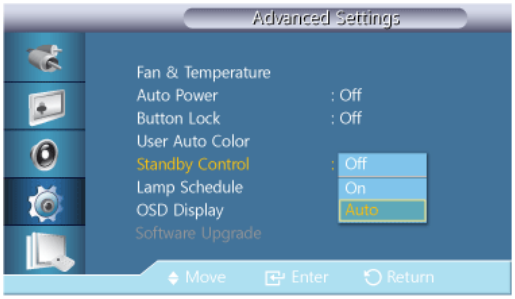
2. **Reset**

   Resets the Color settings.

Note

Enabled only in **PC** mode.

Standby Control



Sets the standby mode, which will be activated when no input signal is detected.

- **Off**

  A message will read <**No Signal**> if no input signal is detected.

- **On**

  Power-saving mode will be activated if no input signal is detected.

- **Auto**

  When no input signal is detected,

  - Power-saving mode will be activated if an external device is connected.

  - A message will read <**No Signal**> if no external device is connected.

Note

- Enabled only in **PC**, **DVI**, **HDMI**, or **DP(DisplayPort)** mode.
- **Auto** will be disabled in **HDMI** mode.

Lamp Schedule

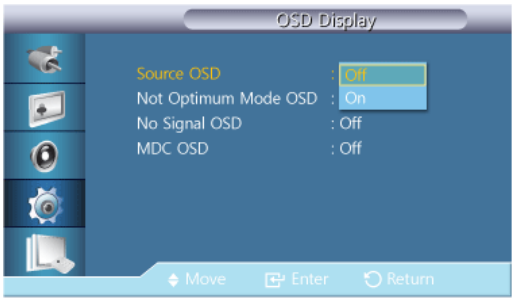


Adjusts the luminance to a user-specified value at a specified time.

OSD Display

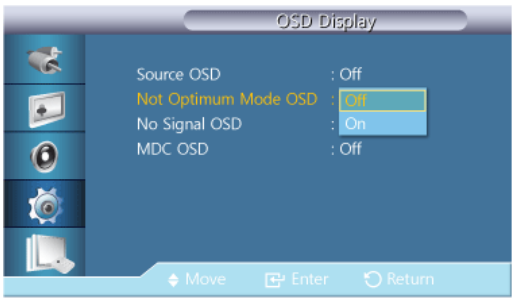
Displays or hides a menu item on the screen.

Source OSD



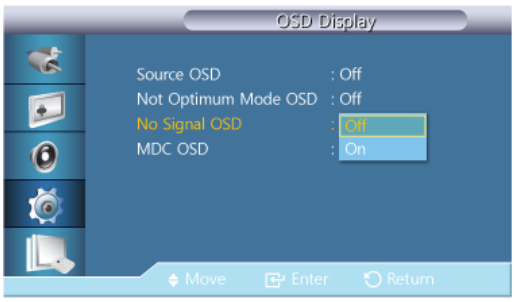
- **Off**
- **On**

Not Optimum Mode OSD



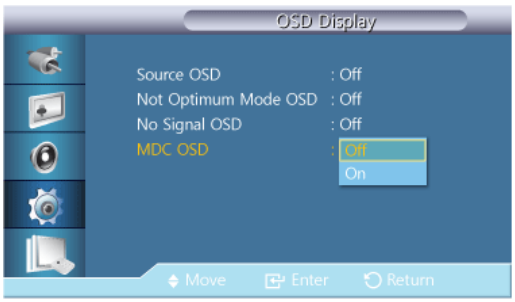
- **Off**
- **On**

No Signal OSD



- **Off**
- **On**

MDC OSD

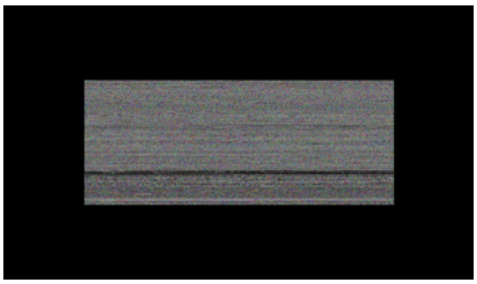


- **Off**
- **On**

Software Upgrade

Performs a software upgrade.

1. Connect the product to a computer via a digital signal such as **DVI** or **HDMI**. Click the BMP image file converted from an SW code. The image below will appear on the screen of the product.
2. While a BMP image onto which the software code has been converted is displayed on the screen, select **Software Upgrade**.



Note

When there are two or more BMP images, they are displayed on the screen using a slideshow.

- It is recommended that the playback interval between two BMP images in the slideshow should be one second. The image extraction probability will decrease with other playback intervals.
- A BMP image might not be extracted if it is covered by another image (for example, the mouse pointer).

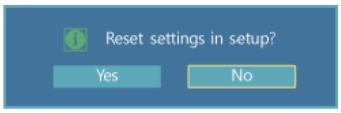
3. If a more recent version than the current software version is detected, you will be asked whether to upgrade the current software. If you select <**Yes**>, the upgrade is performed.
4. When the software upgrade is completed, the product is turned off and on automatically.



Note

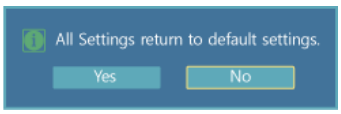
- This only operates with a digital signal, such as in **DVI**, **HDMI1**, or **HDMI2** mode. (The input resolution must be identical to the panel resolution.)
- In **HDMI1** and **HDMI2** modes, the timing values used for both the PC and TV are only supported if the **Edit Name** is set to **PC** or **DVI PC**.
- This is only supported if the **Size** is set to **16:9**.

Setup Reset P A C H M



Reset all the values for a setting.

Reset All P A C H M



Reset all the settings for the display.

Multi Control

Available Modes

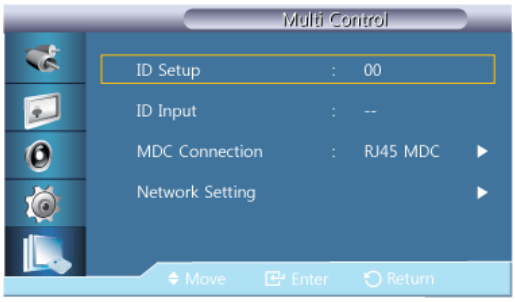
- **PC / DVI / DisplayPort**
- **AV**
- **Component**
- **HDMI**
- **MagicInfo**

Note

MagicInfo can only be enabled when a network box(sold separately) is connected.

Multi Control P A C H M

Assigns an individual ID to the SET.



- **ID Setup**

  Assigns distinctive IDs to the SET.

- **ID Input**

  Use to select the transmitter functions of the individual SET. Only a SET where the ID corresponds to the transmitter setting becomes activated.

- **MDC Connection**

  Selects a port to receive the MDC inputs from.

  - **RS232C MDC** : Communicates with the MDC via a **RS232C MDC** cable.
  - **RJ45 MDC** : Communicates with the MDC via an **RJ45 MDC** cable.

- **Network Setting**

  - **IP Setting** : **Manual**, **Auto**
  - **IP Address** : Manually enter the **IP Address** if **IP Setting** is set to **Manual**.
  - **Subnet Mask** : Manually enter the **Subnet Mask** if **IP Setting** is set to **Manual**.
  - **Gateway** : Manually enter the **Gateway** if **IP Setting** is set to **Manual**.

MagicInfo

Available Modes

- **PC / DVI / DisplayPort**
- **AV**
- **Component**
- **HDMI**
- **MagicInfo**

Note

- **MagicInfo** can only be enabled when a network box(sold separately) is connected.
- The remote control can be used to select **MagicInfo**. However, it is recommended to use a separate USB keyboard to utilize **MagicInfo** fully.

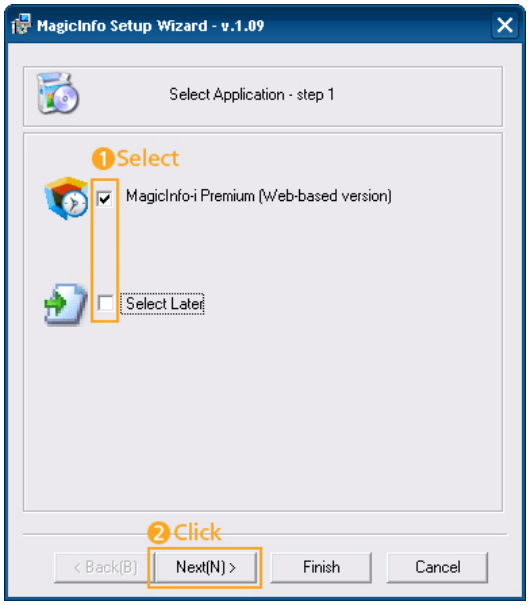
- After connecting or disconnecting the HDMI cable used for **MagicInfo**, make sure to turn the power switches of both the monitor and the network box off and on at the same time, or turn the monitor off and on using the remote control.
- If only the power switch of the monitor is turned off and on, the network box will not operate normally. Make sure to turn the power switches of both the monitor and the network box off and on.
- For **MagicInfo** in Device mode, moving external devices while booting may cause errors. Set up external devices only if the LCD Display turns on.
- Do not unplug the LAN cable used for the network (ex: video display). Otherwise, the Program (MagicInfo) may stop. If you do unplug the cable, restart the system.
- Do not unplug the LAN cable used by an USB device (ex: video display). Otherwise, the Program (MagicInfo) may stop.
- To access other sources, press the SOURCE button in **MagicInfo**.
- The preset password for the LCD Display is "000000".
- The server Program's Power-On option works only if the LCD Display's power is completely shut off.

  Please make sure not to use the Power-On option when the LCD Display is in the process of shutting down since this may cause system errors on the LCD Display.
- When using **MagicInfo** with the MagicInfo Server Program: perform Network mode.
- When using **MagicInfo** with the device directly connected to LCD Display : execute Device mode.
- Press ESC to directly go to the **MagicInfo** Window screen.
- To setup **MagicInfo** on a Windows screen, a keyboard and mouse are required.
- To setup **MagicInfo** on a Windows screen, refer to the MagicInfo Server Help.

  It is highly recommended not to turn off the AC power during an operation.
- For pivoted LCD Displays, ticker transparency is not supported.
- For pivoted LCD Displays, a screen resolution of up to 720 x 480(SD) is supported for movies.
- For drive D:, **EWF** is not applied.
- To save Setup contents that have been changed when **EWF** is in the **Enable** state, you must **Commit** them.
- By selecting **Disable**, **Enable** or **Commit**, the system is restarted.

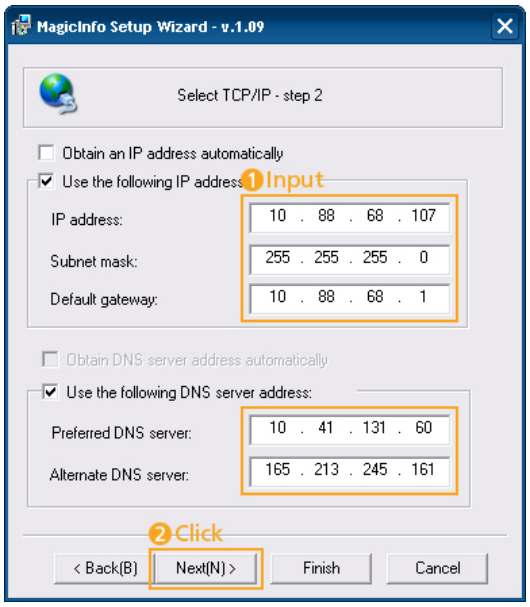
MagicInfo

1. Select Application - step 1



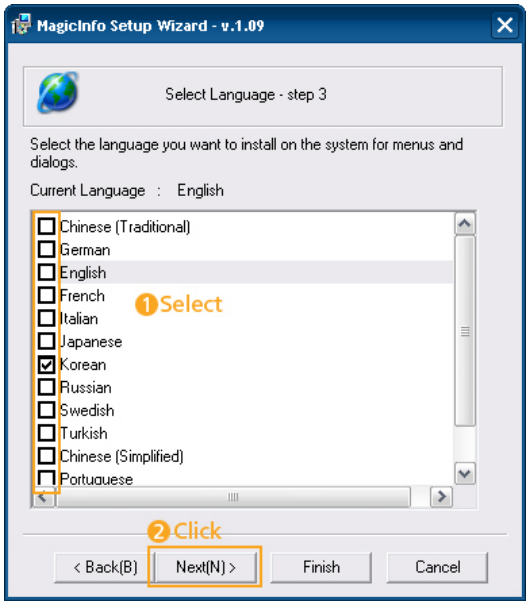
You can select an Application to be executed in your computer when Windows starts.

2. Select TCP/IP - step 2



In step 2 of MagicInfo Setup Wizard, you don’t have to go to Network Setting on the desktop to make your settings for TCP/IP. You just do that at step 2 of MagicInfo installation.

3. Select Language - step 3

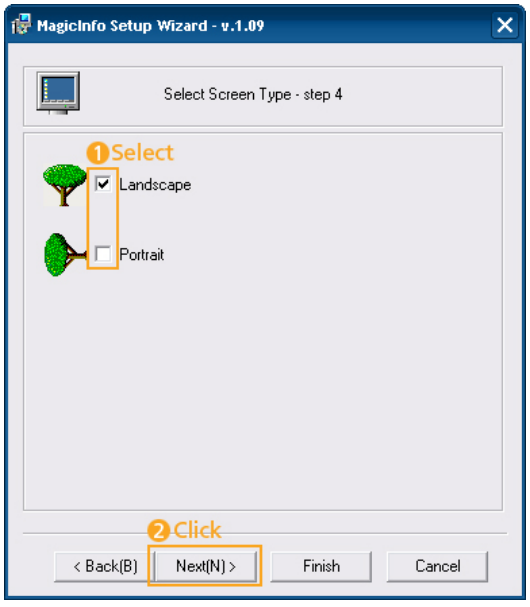


When using multiple languages, you can choose and set a specific language among them.

Note

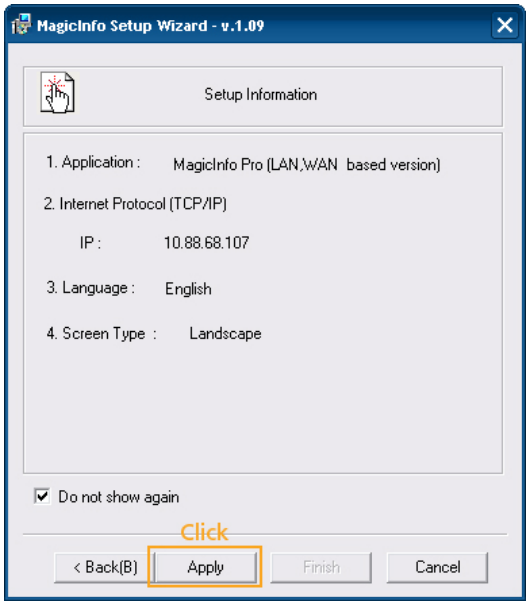
English is set as the default language. You do not need to select a language if you will be using English as the menu display language.

4. Select Screen Type - step 4



You can select which rotation type will be applied to your device.

5. Setup Information



Shows the settings that have been selected by the user.

Note

If the **MagicInfo** icon is not displayed on the notification area, double click the **MagicInfo** icon on the window desktop. The icon will appear.

Troubleshooting

Self-Test Feature Check

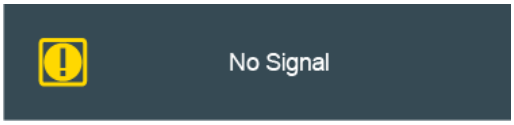
Note

Check the following items yourself before calling for assistance. Contact a Service Center for problems that you cannot solve by yourself.

Self-Test Feature Check

1. Turn off both your computer and the LCD Display.
2. Unplug the video cable from the back of the computer.
3. Turn on the LCD Display.

   The figure shown below ("**No Signal**") appears on a black background when the LCD Display is working normally even though no video signal is detected: While in the Self-Test mode, the LED power indicator remains green and the figure moves around on the screen.



4. Turn off your LCD Display and reconnect the video cable; then turn on both your computer and the LCD Display

If your LCD Display screen remains blank after using the previous procedure, check your video controller and computer system; your LCD Display is functioning properly.

Warning Messages

You can even view the screen at a resolution of 1920 x 1080. However, you will receive the following message for a minute; You can choose to change the screen resolution or stay in the current mode during that time. If the resolution is more than 85Hz, you will see the black screen because the LCD Display does not support over 85Hz.



Note

Refer to Specifications > Preset Timing Modes for the resolutions or frequencies supported by the LCD Display.

Maintenance and Cleaning

1) Maintaining the LCD Display Case.

Clean with a soft cloth after disconnecting the power cord.



- Do not use benzene, thinner or other flammable substances.

2) Maintaining the Flat Panel Display Screen.

Clean with a soft cloth (cotton flannel).



- Never use acetone, benzene or thinner.

  (They may cause flaws or deformation of the screen surface.)

- The user is responsible for any damage caused by using these substances.

Symptoms and recommended Actions

Note

A LCD Display recreates visual signals received from the computer. Therefore, if there is a problem with the computer or the video card, this can cause the LCD Display to become blank, have poor Coloring, become noisy, etc. In this case, first check the source of the problem, and then contact a Service Center or your dealer.

1. Check if the power cord and the video cables are properly connected to the computer.
2. Check if the computer beeps more than 3 times when booting.

   (If it does, request service.)
3. If you installed a new video card or if you assembled the PC, check if you installed the Adaptor (video).
4. Check if the scanning ratio of the video screen is set to between 56 Hz ~ 85 Hz.

   (Do not exceed 60Hz when using the maximum resolution.)
5. If you have problems in installing the Adaptor (video) driver, boot the computer in Safe Mode, remove the Display Adaptor in the "Control Panel -> System -> Device Administrator" and then reboot the computer to reinstall the Adaptor (video) driver.

Check List

Note

The following table lists possible problems and their solutions. Before calling for assistance, check the information in this section to see if you can remedy any problems for yourself. If you do need assistance, please call the phone number on the Information section or contact your dealer.

Problems related to the Installation (PC Mode)

Note

Problems related to the LCD Display installation and their solutions are listed.

Q: The LCD Display screen flickers.

A: Check if the signal cable between the computer and the LCD Display is securely connected.

Q: When the product's internal cooling system operates, condensation may occur on the product surface under certain atmospheric temperature and humidity conditions.

A: This symptom does not affect the product performance and will disappear as the atmospheric temperature and humidity conditions change.

Problems related to the Screen

Note

Problems related to the LCD Display screen and their solutions are listed.

Q: The screen is blank and the power indicator is off.

A: Ensure that the power cord is firmly connected and the LCD Display is on.

Q: "**No signal**" message.

A: Ensure that the signal cable is firmly connected to the PC or video sources.

A: Ensure that the PC or video sources are turned on.

Q: "**Not Optimum Mode**" message.

A: Check the maximum resolution and the frequency of the video Adaptor.

A: Compare these values with the data in the Preset Timing Modes Chart.

Q: The picture rolls vertically.

A: Check if the signal cable is securely connected. Re-connect it, if necessary.

Q: The image is not clear; picture is blurred.

A: Run Frequency **Coarse** and **Fine** tuning.

A: Turn on again after removing all accessories (video extension cable, etc.)

A: Set the resolution and frequency to the recommended ranges.

Q: The picture image is unstable and shakes.

A: Check if the resolution and frequency set for the computer video card falls in the range supported by the LCD Display. If not, reset them referring to the current Information under the LCD Display menu and Preset Timing Modes.

Q: Ghost images are shown in the picture.

A: Check if the resolution and frequency set for the computer video card falls in the range supported by the LCD Display. If not, reset them referring to the current Information under the LCD Display menu and Preset Timing Modes.

Q: The image is too light or too dark.

A: Adjust the **Brightness** and **Contrast**.

(Refer to the **Brightness**, **Contrast**)

Q: The screen Color is inconsistent.

A: Adjust the **Color Control** option in the OSD adjustment menu.

Q: The Color image is distorted by dark shadows.

A: Adjust the **Color Control** option in the OSD adjustment menu.

Q: The Color white is poor.

A: Adjust the **Color Control** option in the OSD adjustment menu.

Q: The Power Indicator blinks.

A: The LCD Display is currently saving the changes made in the settings to the OSD memory.

Q: The screen is blank and the power indicator light blinks every 0.5 or 1 seconds.

A: The LCD Display is using its power management system. Press any key on the keyboard.

Q: The screen is blank and it is blinking.

A: If you see the "**TEST GOOD**" message on the screen when you pressing the MENU button, check the cable connection between the LCD Display and the computer to ensure that the connector is properly connected.

Problems related to Audio

Note

Problems related to audio signals and their solutions are listed below.

Q: No sound.

A: Ensure that the audio cable is firmly connected to both the audio-in port on your LCD Display and the audio-out port on your sound card.

A: Check the volume level.

Q: The sound level is too low.

A: Check the volume level.

A: If the volume is still too low after turning the control to its maximum, check the volume control on the computer sound card or software Program.

Q: The sound is too high or too low.

A: Adjusts the **Treble** and **Bass** to the appropriate levels.

Problems related to the Remote Control

Note

Problems related to the remote control and their solutions are listed.

Q: The remote control buttons do not respond.

A: Check the polarities (+/-) of the batteries.

A: Check if the batteries are empty.

A: Check if the power is on.

A: Check if the power cord is securely connected.

A: Check if a special fluorescent or neon lamp is on in the vicinity.

Q & A

Q: How can I change the frequency?

A: The frequency can be changed by reconfiguring the video card.

Note

That video card support can vary, depending on the version of the driver used. (Refer to the computer or the video card manual for details.)

Q: How can I adjust the resolution?

A: Windows XP:

Control Panel → Appearance and Themes → Display → Settings.

A: Windows ME/2000:

Control Panel → Display → Settings.

* Contact the video card manufacturer for details.

A: Windows Vista:

Control Panel → Appearance and Personalization → Personalize → Display Settings.

* Contact the video card manufacturer for details.

A: Windows 7:

Control Panel → Appearance and Personalization → Display → Adjust Resolution.

* Contact the video card manufacturer for details.

Q: How can I set the Power Saving function?

A: Windows XP:

Control Panel → Appearance and Themes → Display → Screen Saver.

Set the function in the BIOS-SETUP of the computer. (Refer to the Windows / Computer Manual).

A: Windows ME/2000:

Control Panel → Display → Screen Saver.

Set the function in the BIOS-SETUP of the computer. (Refer to the Windows / Computer Manual).

A: Windows Vista:

Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings.

Set the function in the BIOS-SETUP of the computer. (Refer to the Windows / Computer Manual).

A: Windows 7:

Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings.

Set the function in the BIOS-SETUP of the computer. (Refer to the Windows / Computer Manual).

Note

Before calling for assistance, check the information in this section to see if you can remedy any problems yourself. If you do need assistance, please call the phone number on the Information section or contact your dealer.

Specifications

General

General	
Model Name	SyncMaster OL46B

LCD Panel	
Size	46.0 inch / 116 cm
Display area	40.1 inches (H) x 22.5 inches (V) 1018.08 mm (H) x 572.67 mm (V)

Synchronization	
Horizontal	30 ~ 81 kHz
Vertical	56 ~ 85 Hz

Display Color
16.7 M

Resolution	
Optimum resolution	1920 x 1080 @ 60 Hz
Maximum resolution	1920 x 1080 @ 60 Hz

Maximum Pixel Clock
148.5 MHz (Analog,Digital)

Power Supply
Refer to the label at the back of the product as the standard voltage can vary in different countries.

Signal Connectors
Input : Composite/Component (common), PC D-Sub, DVI, HDMI, DP, Audio In, LAN, RS232C IN Output : Audio Out, RS232C Out Optional Network : USB3.0 2port, USB2.0 2port, LAN, DP out, RS232C

Dimensions (W x H x D) / Weight
24.2 x 68.3 x 15.4 inches / 614.2 x 1735.0 x 390.0 mm / 91.5 kg / 201.7 lbs

Environmental considerations		
Operating	Monitor set	Temperature : -22°F ~ 104°F (-30°C ~ 40°C) Humidity : 10 % ~ 80 %, non-condensing
Storage		Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Humidity : 5 % ~ 95 %, non-condensing

Plug-and-Play

This product can be installed and used with any Plug-and-Play compatible systems. Two-way data exchange between the product and PC system optimizes the product settings. product installation takes place automatically. However, you can customize the installation settings if desired.

Dot Acceptable

TFT-LCD panels manufactured by using advanced semiconductor technology with precision of 1ppm (one millionth) above are used for this product. But the pixels of RED, GREEN, BLUE and WHITE color appear to be bright sometimes or some black pixels may be seen. This is not from bad quality and you can use it without any problems.

For example, the number of TFT-LCD sub pixels contained in this product are 6,220,800.

Note

Design and specifications are subject to change without prior notice.

Note

This device is a Class A digital apparatus.

US only

- POLLUTION DEGREE 2
- OVERVOLTAGE CATEGORY II
- IP classification
  - LCD monitor unit part : IP class 56
- NON DETACHABLE POWER SUPPLY CORD used for PLUGGABLE EQUIPMENT, the socket-outlet shall be installed near the equipment and shall be easily accessible.

(USA only)
Dispose unwanted electronics through an approved recycler.
To find the nearest recycling location, go to our website,
www.samsung.com/recyclingdirect, or call (877) 278 - 0799

PowerSaver

This LCD Display has a built-in power management system called PowerSaver. This system saves energy by switching your LCD Display to low-power mode when it has not been used for a certain amount of time. The LCD Display automatically returns to normal operation when you press a key on the keyboard. For energy conservation, turn your LCD Display OFF when it is not needed, or when leaving it unattended for long periods. The PowerSaver system operates with a VESA DPM compliant video card installed in your computer. Use the software utility installed on your computer to set up this feature.

PowerSaver

State		Normal Operation	Power saving mode	Power off (Power Button)
Power Indicator		On	Blinking	Off
Power Consumption	OL46B	Rating : 540 W	less than 2 Watts	less than 2 Watts

State	Normal Operation	Power saving mode	Power off (Power Button)
(Without Network Box)	Typical : 395 W		

Note

- The actual power consumption may be different from the indicated power consumption above if the system conditions or settings are changed.
- SOG (Sync On Green) is not supported.
- To stop any power consumption, turn off the switch or disconnect the power cable on the back. Be sure to disconnect the power if you intend to stay away from home for many hours.

Preset Timing Modes

If the signal transferred from the computer is the same as the following Preset Timing Modes, the screen will be adjusted automatically. However, if the signal differs, the screen may go blank while the power LED is on. Refer to the video card manual and adjusts the screen as follows.

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 640 x 350	31.469	70.086	25.175	+/-
IBM, 640 x 480	31.469	59.940	25.175	-/-
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 848 x 480	31.020	60.000	33.750	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 X 768	47.776	59.870	79.500	-/+
VESA, 1280 X 960	60.000	60.000	108.000	+/+
VESA, 1280 X 1024	63.981	60.020	108.000	+/+
VESA, 1280 X 1024	79.976	75.025	135.000	+/+
VESA, 1360 x 768	47.712	60.015	85.500	+/+
VESA, 1366 x 768	47.712	59.790	85.500	+/+
VESA, 1920 x 1080	67.500	60.000	148.500	+/+

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA, 1920 x 1080(RB)	66.587	59.934	138.500	+/-



Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called the Horizontal Cycle and the inverse number of the Horizontal Cycle is called the Horizontal Frequency. Unit: kHz

Vertical Frequency

Like a fluorescent lamp, the screen has to repeat the same image many times per second to display an image to the user. The frequency of this repetition is called the Vertical Frequency or Refresh Rate. Unit: Hz

Information

For a Better Display

Adjust the computer resolution and screen injection rate (refresh rate) on the computer as described below to enjoy the best picture quality. You can have an uneven picture quality on screen if the best picture quality is not provided for TFT-LCD.

- Resolution: 1920 x 1080
- Vertical frequency (refresh rate): 60 Hz

TFT-LCD panels manufactured by using advanced semiconductor technology with a precision of 1ppm (one millionth) and above is used for this product. But the pixels of RED, GREEN, BLUE and WHITE Color seem to be bright sometimes or some of black pixels could be seen. This is not from bad quality and you can use it without any problems.

- For example, the number of TFT-LCD sub pixels contained in this product are 6,220,800.

When cleaning the monitor and the panel outside, please apply a small amount of water to a soft cloth. Rub softly when cleaning the LCD area.If excessive force is applied, you may stain it.

If you are not satisfied with the picture quality, you can get better quality of picture by performing the "**Auto Adjustment**" function in display screen that is appeared as window termination button is pressed. If there's still noise after the automatic adjustment, use the **Fine**/**Coarse** adjustment function.

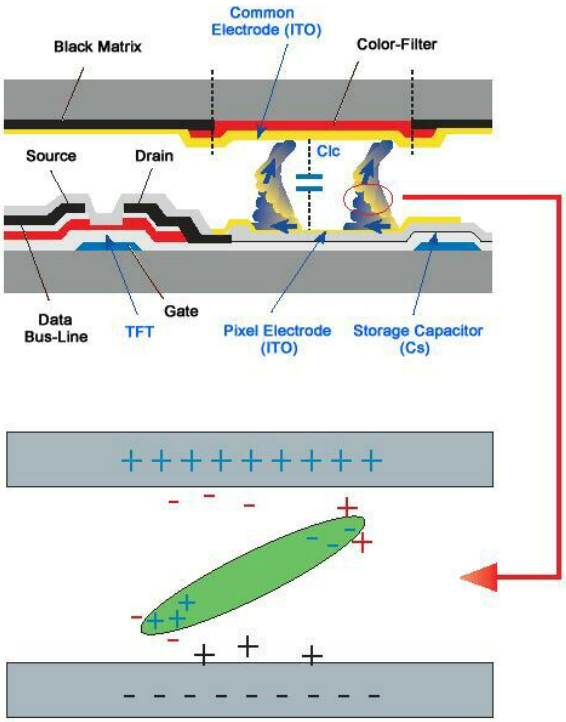
When viewing a fixed screen for an extended period of time, a residual image or blurriness may appear. Change the mode to energy save or set a screensaver to move the picture when you need to be away from the monitor for an extended period of time.

PRODUCT INFORMATION (Image Retention Free)

What is Image Retention ?

Image retention may not occur when a LCD panel is operated under normal conditions.

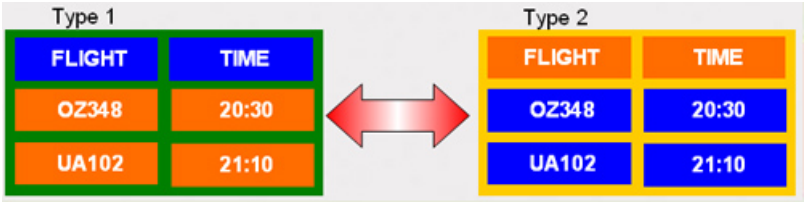
Normal conditions are defined as continuously changing video patterns. When the LCD panel is operated for a long time with a fixed pattern (over 12 hours), there may be slight difference in voltage between electrodes that work the liquid crystal (LC) in a pixel. The voltage difference between electrodes increases with time, forcing the liquid crystal to lean. When this occurs, the previous image may be seen when the pattern is changed. To prevent this, the accumulated voltage difference must be decreased.



Power Off, Screen Saver, or Power Save Mode

- Turn the power off for 2 hours after 12 hours in use
- Set the Monitor to power off with the PC Display Properties Power Scheme.
- Use a Screen saver if possible - Screen saver in one Color or a moving image is recommended.
- The Image Retention Free function applied to the product is recommended.

Change the Color Information periodically



Note

Use Two different Colors

Rotate the Color Information with 2 different Colors every 30 minutes.

- Avoid using a combination of characters and background Color with large difference in luminance.

  Avoid using Grey Colors, which can cause Image retention easily.

  Avoid: Colors with big difference in luminance (Black & White, Grey)





Change the characters Color periodically

- Use Bright Colors with little difference in luminance.

  - Cycle : Change the characters Color and background Color every 30 minutes



- Every 30 minutes, change the characters with movement.



- Have the images and logo cycle periodically.

  - Cycle: Display moving image together with Logo for 60 seconds after 4 hours in use.

- The best way to protect your monitor from Image retention is to turn the Power off, or set your PC or System to operate a Screen Saver Program when you are not using it. If these guidelines are not followed, it may affect your warranty.

Apply the Screen Pixel function on Product

- Apply the Screen Pixel function

  - Symptom: Dot with Black Color move up and down.



- Apply the Screen Bar function

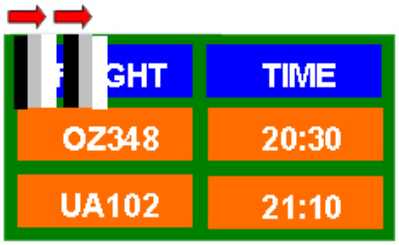
  - Symptom: Horizontal / Vertical Bar with Black Color move up and down.



Apply the Screen Erasing function on Product

- Apply the Screen Erasing function

  - Symptom: 2 Vertical blocks move while erasing the display



Appendix

Contact SAMSUNG WORLDWIDE

Note

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

	North America	
U.S.A	1-800-SAMSUNG (726-7864)	http://www.samsung.com
CANADA	1-800-SAMSUNG (726-7864)	http://www.samsung.com/ca
		http://www.samsung.com/ca_fr (French)
MEXICO	01-800-SAMSUNG (726-7864)	http://www.samsung.com
	Latin America	
ARGENTINA	0800-333-3733	http://www.samsung.com
BRAZIL	0800-124-421	http://www.samsung.com
	4004-0000	
BOLIVIA	800-10-7260	http://www.samsung.com
CHILE	800-SAMSUNG (726-7864)	http://www.samsung.com
	From mobile 02-482 82 00	
COLOMBIA	01-8000112112	http://www.samsung.com
COSTA RICA	0-800-507-7267	http://www.samsung.com
DOMINICA	1-800-751-2676	http://www.samsung.com
ECUADOR	1-800-10-7267	http://www.samsung.com
EL SALVADOR	800-6225	http://www.samsung.com
GUATEMALA	1-800-299-0013	http://www.samsung.com
HONDURAS	800-27919267	http://www.samsung.com
JAMAICA	1-800-234-7267	http://www.samsung.com
NICARAGUA	00-1800-5077267	http://www.samsung.com
PANAMA	800-7267	http://www.samsung.com
PERU	0-800-777-08	http://www.samsung.com
PUERTO RICO	1-800-682-3180	http://www.samsung.com
TRINIDAD & TOBAGO	1-800-SAMSUNG (726-7864)	http://www.samsung.com
VENEZUELA	0-800-100-5303	http://www.samsung.com
	Europe	
ALBANIA	42 27 5755	http://www.samsung.com
AUSTRIA	0810 - SAMSUNG (7267864, € 0.07/min)	http://www.samsung.com
BELGIUM	02-201-24-18	http://www.samsung.com/be (Dutch)

Europe

		http://www.samsung.com/be_fr (French)
BOSNIA	05 133 1999	http://www.samsung.com
BULGARIA	07001 33 11	http://www.samsung.com
CROATIA	062 SAMSUNG (062 726 7864)	http://www.samsung.com
CZECH	800 - SAMSUNG (800-726786) Samsung Electronics Czech and Slovak, s.r.o., Oasis Florenc, Sokolovská 394/17, 180 00, Praha 8	http://www.samsung.com
DENMARK	70 70 19 70	http://www.samsung.com
FINLAND	030 - 6227 515	http://www.samsung.com
FRANCE	01 48 63 00 00	http://www.samsung.com
GERMANY	01805 - SAMSUNG (726-7864, € 0,14/Min)	http://www.samsung.com
CYPRUS	From landline : 8009 4000	http://www.samsung.com
GREECE	From landline : 80111-SAM-SUNG (7267864) From landline & mobile : (+30) 210 6897691	http://www.samsung.com
HUNGARY	06-80-SAMSUNG (726-7864)	http://www.samsung.com
ITALIA	800-SAMSUNG (726-7864)	http://www.samsung.com
KOSOVO	+381 0113216899	http://www.samsung.com
LUXEMBURG	261 03 710	http://www.samsung.com
MACEDONIA	023 207 777	http://www.samsung.com
MONTENEGRO	020 405 888	http://www.samsung.com
NETHERLANDS	0900-SAMSUNG (0900-7267864) (€ 0,10/Min)	http://www.samsung.com
NORWAY	815-56 480	http://www.samsung.com
POLAND	0 801-1SAMSUNG(172-678) +48 22 607-93-33	http://www.samsung.com
PORTUGAL	808 20-SAMSUNG (808 20 7267)	http://www.samsung.com
RUMANIA	From landline : 08010-SAM-SUNG (7267864) From landline & mobile : (+40) 21 206 01 10	http://www.samsung.com
SERBIA	0700 SAMSUNG (0700 726 7864)	http://www.samsung.com
SLOVAKIA	0800 - SAMSUNG (0800-726 786)	http://www.samsung.com
SPAIN	902 - 1 - SAMSUNG (902 172 678)	http://www.samsung.com
SWEDEN	0771 726 7864 (SAMSUNG)	http://www.samsung.com
SWITZERLAND	0848 - SAMSUNG (7267864, CHF 0.08/min)	http://www.samsung.com/ch

Europe

		http://www.samsung.com/ch_fr/(French)
U.K	0330 SAMSUNG (7267864)	http://www.samsung.com
EIRE	0818 717100	http://www.samsung.com
LITHUANIA	8-800-77777	http://www.samsung.com
LATVIA	8000-7267	http://www.samsung.com
ESTONIA	800-7267	http://www.samsung.com
TURKEY	444 77 11	http://www.samsung.com

CIS

RUSSIA	8-800-555-55-55	http://www.samsung.com
GEORGIA	8-800-555-555	http://www.samsung.com
ARMENIA	0-800-05-555	http://www.samsung.com
AZERBAIJAN	088-55-55-555	http://www.samsung.com
KAZAKHSTAN	8-10-800-500-55-500 (GSM: 7799)	http://www.samsung.com
UZBEKISTAN	8-10-800-500-55-500	http://www.samsung.com
KYRGYZSTAN	00-800-500-55-500	http://www.samsung.com
TADJIKISTAN	8-10-800-500-55-500	http://www.samsung.com
MONGOLIA	-	http://www.samsung.com
UKRAINE	0-800-502-000	http://www.samsung.com/ua
		http://www.samsung.com/ua_ru
BELARUS	810-800-500-55-500	http://www.samsung.com
MOLDOVA	00-800-500-55-500	http://www.samsung.com

Asia Pacific

AUSTRALIA	1300 362 603	http://www.samsung.com
NEW ZEALAND	0800 SAMSUNG (0800 726 786)	http://www.samsung.com
CHINA	400-810-5858	http://www.samsung.com
HONG KONG	(852) 3698 - 4698	http://www.samsung.com/hk
		http://www.samsung.com/hk_en/
INDIA	1800 1100 11	http://www.samsung.com
	3030 8282	
	1800 3000 8282	
	1800 266 8282	
INDONESIA	0800-112-8888	http://www.samsung.com
	021-5699-7777	
JAPAN	0120-327-527	http://www.samsung.com
MALAYSIA	1800-88-9999	http://www.samsung.com

	Asia Pacific	
PHILIPPINES	1-800-10-SAMSUNG (726-7864) for PLDT	http://www.samsung.com
	1-800-3-SAMSUNG(726-7864) for Digitel	
	1-800-8-SAMSUNG(726-7864) for Globe	
	02-5805777	
SINGAPORE	1800-SAMSUNG (726-7864)	http://www.samsung.com
THAILAND	1800-29-3232	http://www.samsung.com
	02-689-3232	
TAIWAN	0800-329-999	http://www.samsung.com
	0266-026-066	
VIETNAM	1 800 588 889	http://www.samsung.com
	Middle East	
IRAN	021-8255	http://www.samsung.com
OMAN	800-SAMSUNG (726-7864)	http://www.samsung.com
KUWAIT	183-2255	http://www.samsung.com
BAHRAIN	8000-4726	http://www.samsung.com
EGYPT	08000-726786	http://www.samsung.com
JORDAN	800-22273	http://www.samsung.com
MOROCCO	080 100 2255	http://www.samsung.com
SAUDI ARABIA	9200-21230	http://www.samsung.com
U.A.E	800-SAMSUNG (726-7864)	http://www.samsung.com
	Africa	
CAMEROON	7095- 0077	http://www.samsung.com
COTE D'LVOIRE	8000 0077	http://www.samsung.com
GHANA	0800-10077	http://www.samsung.com
	0302-200077	
KENYA	0800 724 000	http://www.samsung.com
NIGERIA	0800-726-7864	http://www.samsung.com
SENEGAL	800-00-0077	http://www.samsung.com
SOUTH AFRICA	0860-SAMSUNG (726-7864)	http://www.samsung.com
TANZANIA	0685 88 99 00	http://www.samsung.com
UGANDA	0800 300 300	http://www.samsung.com

Responsibility for the Pay Service (Cost to Customers)

 **Note**

When the service is requested, in spite of in warranty, we may charge you for a visit from a service technician in the following cases.

Not a product defect

Cleaning of the product, Adjustment, Explanation, Re-installation and etc.

- If a service technician gives instructions on how to use product or simply adjusts options without disassembling product.
- If a defect is caused by external environmental factors. (Internet, Antenna, Wired Signal, etc.)
- If a product is reinstalled or devices are connected additionally after installing the purchased product for the first time.
- If a product is reinstalled to move to a different spot or to move to a different house.
- If customer requests instructions on how to use because of another company's product.
- If customer requests instructions on how to use the network or another company's program.
- If customer requests software installation and setup for the product.
- If a service technician removes/cleans dusts or foreign materials inside of the product.
- If customer requests an installation additionally after purchasing a product through home-shopping or online.

A Product damage caused by customer's fault

Product damage caused by customer's mishandling or wrong repair

If a product damage is caused by;

- external impact or drop.
- use of supplies or separatly sold product unspecified by Samsung.
- repair from a person besides an engineer of outsourcing service company or partner of Samsung Electronics Co., Ltd.
- remodeling or repairing the product by customer.
- using it with incorrect voltage or non-authorised electrical connections.
- not following the "cautions" in User Manual.

Others

- If product fails by natural disaster. (lightning, fire, earthquake, flood damage, etc)
- If consumable components are all used up. (Battery, Toner, Fluorescent lights, Head, Vibrator, Lamp, Filter, Ribbon, etc.)

Note

If customer requests a service in case the product has no defect, service fee may be charged. So please read User Manual first.

Terms

Dot Pitch	The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance be-

	tween two dots of the same Color is called the 'Dot Pitch'. Unit: mm
Vertical Frequency	The screen must be redrawn several times per second in order to create and display an image for the user. The frequency of this repetition per second is called the Vertical Frequency or Refresh Rate. Unit: Hz Example: If the same light repeats itself 60 times per second, this is regarded as 60 Hz.
Horizontal Frequency	The time to scan one line connecting the right edge to the left edge of the screen horizontally is called the Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit: kHz
Interlace and Non-Interlace Methods	Showing the horizontal lines of the screen from the top to the bottom sequentially is called the Non-Interlace method while showing odd lines and then even lines in turn is called the Interlace method. The Non-Interlace method is used for the majority of monitors to ensure a clear image. The Interlace method is the same as that used in TVs.
Plug & Play	This is a function that provides the best quality screen for the user by allowing the computer and the monitor to exchange information automatically. This monitor follows the international standard VESA DDC for the Plug & Play function.
Resolution	The number of horizontal and vertical dots used to compose the screen image is called the 'resolution'. This number shows the accuracy of the display. A high resolution is good for performing multiple tasks as more image information can be shown on the screen. Example: If the resolution is 1920 x 1080, this means the screen is composed of 1920 horizontal dots (horizontal resolution) and 1080 vertical lines (vertical resolution).

Correct Disposal

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)



(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Correct disposal of batteries in this product



(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

Authority

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